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SOUTH AUSTRALIA;

ITS ADVANTAGES AND ITS RESOURCES.

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A DESCRIPTION OF THAT COLONY,

AND

A MANUAL OF INFORMATION FOR EMIGRANTS.

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BY

GEORGE BLAKISTON WILKINSON.

LONDON:
JOHN MURRAY, ALBEMARLE STREET.
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PREFACE.

THE present work is for the most part the result of seven years' personal observation in the Colony of South Australia, and contains, from this source, detailed statements on the prospects of labourer and farmer, on Agriculture, Stock Farming, Building, Gardening, Manufacturing in various branches, and last, not least, on Mining and Mineral Productions, in that flourishing Colony.

The style of the book is, the Author presumes, much in correspondence with the subject; for though the horny hand of toil cannot make fine strokes with the pen, yet it may represent the demands, the works, and the rewards of human labour. He feels that otherwise he would have much to apologise for on

this score, both in the manner and arrangement of his pages; but he has the hope that his plain garb and homeliness, and cursory method, will enable the proper class among his countrymen to come to his remarks without any fear of misunderstanding, or any feeling of want of sympathy with the Author. In short, the Book is in a rough dress, which, it is trusted, will not hinder its doing good service to all classes of those who need it.

One leading motive which has converted the writer into an Author, a character which he never expected to assume, is the wish to proclaim to thousands and tens of thousands of his poor countrymen, and, it may be, even to the British Government, the capacities and kindliness of the new home which may await all who are desirous to emigrate to the splendid country and exquisite climate of South Australia. If he should succeed in directing a well-ordered stream of emigration to this favoured land, his whole object will be gratified.

Wherever he found it expedient, he has availed himself of the valuable labours of his

predecessors who have written on the subject; and he believes that his work will be found tolerably complete on the subjects which it professes to treat.

He has also added some lighter matters, and a few remarks on the natives, as well from his own experience as from the observation of two valued friends and fellow-travellers.

New West End, Hampstead.
April, 1848.

CONTENTS.

CHAPTER I.

Page

Demand for Emigrants in South Australia.—Late Arrivals of Emigrants.—Report on the want of Emigration.—Frauds on the Emigration Fund.—Opportunities of acquiring Wealth.—Labour Market.—What Class should Emigrate.—Cautions on First Arrival.—Advantages to Married Men.—Miners in demand.—Farmers and Farming.—On the Choice of Emigrants.—Adelaide Markets . 1

CHAPTER II.

Emigrant Ships.—Fares.—Free Emigrants.—Articles required by Government Emigrants.—Rules on board Ship.—Articles required by Cabin and Intermediate Emigrants 26

CHAPTER III.

First Establishment of South Australia.—Extent of Land.—Port Adelaide.—Population of Port Adelaide.—Road to Adelaide.—River Torrens.—Park Lands.—The City of Adelaide.—Bridges.—Population.—Small Towns and Villages.—Number and Description of Manufactories.—Churches.—Schools.—Public Houses.—Convictions of Offenders.—Government Revenue 40

CHAPTER IV.

Page

Agricultural Farming. Advice to Farmers. — Living in Town. — Hut Building. — Clearing Land. — Steeping Wheat.—Fencing.—Reaping Machine.—Average Crop. —Barley, Oats, Maize, Potatoes.—Expenses of Farming. —Building.—Purchasing Land.—Expense of Farming Eighty Acres.—Farming Implements.—Price of Farm Produce.—Tobacco Culture.—Agricultural Society . 60

CHAPTER V.

Cattle Farming. Prices of Cattle in Adelaide.—Expenses of Cattle Farming.—Horses.—Cattle Hunting.—Breed of Cattle for Dairy.—Bulls.—Milking.—Branding.— Burning the Grass.—Hutkeepers.—Benefit of Milking. —Cattle Owner's Life in the Bush.—Tea Drinking and Smoking.—Travelling to the Station.—Cattle Driving. —Fires 94

CHAPTER VI.

Sheep Farming. Sheep in Australia.—Lambing Time.— Shearing. — Wool. — Expenses of Sheep Farming. — Profits.—Diseases of Sheep.—Washing the Wool.—Runs for Sheep. — Land Regulations. — Renting Land. — Licences for Runs 129

CHAPTER VII.

First Introduction of Cattle into Adelaide.—Kangaroo Flesh. — Breaking in Steers for Draught. — Journey Overland. — Hostile Natives. — Raye's Journey. — The Bushman's Food.—Price of Cattle in New South Wales 154

CHAPTER VIII.

Climate.—Rain Gauge.—Hot Winds.—Meteorological Observations. — Storms. — Earthquakes. — Diseases. — Sea-

Page

sons.—Gardeners' Calendar.—Native Trees.—Eucalyptus Tribe.—Manna.—Acacia Tribe.—Gum Acacia.—Gummers.—Casuarina or She Oak.—Native Cherry.—Tea Tree.—Honeysuckle Tree.—Sarsaparilla.—Geraniums.—The Hop Plant.—Olive.—Indigo.—Tobacco.—Mulberry 185

CHAPTER IX.

Wild Dogs.—Locusts.—The Wombat.—The Kangaroo.—The Emu 232

CHAPTER X.

Mines and Minerals of South Australia 253

CHAPTER XI.

Natives.—Their Habitations.—Working among the Settlers.—Grumblers in the State of Nature.—Painting the Body.—Native Women.—Clothing.—Superstitions.—Burials.—Corroberies.—Fighting.—Jealousy.—Stealing Women.—Night Attacks.—Treatment in case of Illness.—No Regular Medical Attendant allowed.—Port Lincoln Blacks.—Superstitions regarding Death.—Mr. Eyre's Account.—Observations of W. P. James, Esq., on the Aboriginal Natives of South Australia.—Also of R. G. Thomas, Esq. 317

APPENDIX 368

SOUTH AUSTRALIA;

ITS ADVANTAGES AND RESOURCES.

CHAPTER I.

DEMAND FOR EMIGRANTS IN SOUTH AUSTRALIA.—LATE ARRIVALS OF EMIGRANTS.—REPORT ON THE WANT OF EMIGRATION.—FRAUDS ON THE EMIGRATION FUND.—OPPORTUNITIES OF ACQUIRING WEALTH.—LABOUR MARKET.—WHAT CLASS SHOULD EMIGRATE.—CAUTIONS ON FIRST ARRIVAL.—ADVANTAGES TO MARRIED MEN.—MINERS IN DEMAND.—FARMERS AND FARMING.—ON THE CHOICE OF EMIGRANTS.—ADELAIDE MARKETS.

THE great demand for labour in South Australia during the past few years, has naturally directed the attention of the colonists to Great Britain as the mart for supplying the deficiency; and many efforts have been made to induce emigration to Adelaide, which, however, although partially successful, have not hitherto obtained a supply commensurate with what is required. Thus, notwithstanding the thousands of persons who have arrived in the colony during the last two years, the cry for, and the complaints of scarcity of, labour have been at no time greater than at present, at least so far back only as last August. The impetus given by the mines has spread in every

direction. The farmers, in consequence of the high price of field produce, are not merely cultivating to a much larger extent than formerly, but they are desirous to improve their present, or to build new and more comfortable, dwellings; to form gardens, orchards, and vineyards, and to make other improvements on their grounds. Instead, however, of being able to make improvements, they are in the greatest perplexity to procure sufficient labour to reap their crops; and probably they have already found, by painful experience, that it is better to stand idle, and not produce grain, where there is no chance of getting it housed. I have myself seen many acres of good corn destroyed for want of the means of gathering it in.

The sheep farmers are in the same plight, and complain as much as the agriculturists, for they *must* procure men to take care of their flocks, and they have to pay higher prices at the present time when the wool has become much less remunerative. The demand for men for new flocks and herds is also great, and the supply quite inadequate.

Such is the information collected from the Adelaide papers, published directly after the arrival from England of about three hundred emigrants in the course of one day. These emigrants came in two vessels, which both entered the port at the same time, and caused a considerable sensation. The day after their arrival the port was thronged by hundreds of masters in want of servants, and high wages were offered. This may easily be verified from the newspapers which are there published—not, be it observed,

in order to puff the colony to strangers, but for circulation in Adelaide itself. It ought assuredly to be seen to by those who have no employment here in England, especially since at this time there is little difficulty in finding a passage out through the emigration fund. The great deficiency, however, is said to be felt in the mines, several of which are not worked, simply from the want of labour; these alone it is calculated would give immediate employment to at least three thousand men. The miners at present in employment have been enabled to purchase cattle, horses, houses, and other property, or, where they have not been so thrifty, they have, at all events, evidently shown that they had more money than they could take care of, and scenes of extravagance and riotous luxury have been constantly witnessed.

From the system of emigration hitherto pursued, it seems plain that the machinery at home, for diffusing information respecting the superior advantages of this colony as a field for labour and enterprise, is extremely defective and inadequate. The result is, that although there are, and for a length of time have been, available funds to pay the passage of thousands from the three kingdoms, only an insignificant number have been induced to emigrate; notwithstanding, there is reason to believe that, if proper means were taken, an ample supply of superior workmen and agricultural labourers might still be procured, to their own great benefit and to the good and wealth of the colony. The late newspapers from South Australia give the most encouraging accounts of its prosperity, and mention that the crops are uncommonly flou-

rishing and the wheat splendid *. From all quarters the wool crop is said to be excellent in quantity as well as quality, and in capital condition.

The colony of South Australia was first established in December 1836, and has now a population of about 25,000 souls; and certainly from its present circumstances, and equally from the intrinsic wealth it possesses, it may fairly be said that no settlement was ever more prosperous, or held out greater promise of becoming within a few years a place of consideration in commerce and trade.

The following is an extract of a communication by the Colonial Secretary in South Australia, dated 11th July, 1846:—

"The present very urgent demand for labourers, mechanics and others, quite obviates the necessity of my pointing out any class in particular which may be considered to be most in request; and the high rate of wages now paid sufficiently indicates the insufficient supply in the labour market, whilst it cannot fail, at the same time, to afford encouragement to all the industrious classes who may be intending to emigrate from the mother-country, to seek a livelihood for themselves and their families in South Australia. The scarcity of female domestic servants is most severely felt by those requiring their services; and the consequent exorbitant wages now demanded by them are seldom conducive to their own welfare, or to the comfort of those by whom they are em-

* A proof of the excellence of Australian wheat is that, when sold in England, it realises from two to three shillings per quarter more than the wheat of this country.

ployed. Cooks may be said to be almost extinct; and for women who can be recommended for situations of trust, to take charge of children, &c., there is great demand.

"The arrivals from Great Britain, as well as from the neighbouring colonies during the present quarter, have made no perceptible impression on the labour market; and the difficulty now experienced by the colonists (agriculturists especially) in finding the necessary labour must be seriously impeding their operations. Mining being the most attractive pursuit, a large majority of the labouring classes are directing their attention to that object from those employments in which they have been previously engaged.

"The prices of all the necessaries of life have experienced a considerable rise within the period embraced in this Report; but no danger whatever need be apprehended of a scarcity of provisions arising from the introduction of emigrants to any probable amount, the colony, from its vast resources, being quite capable of producing food for at least double its present population."

It is indeed extraordinary that so little notice should be taken by the people of England of the means of providing employment for the large numbers of industrious and deserving labourers at present without bread. It is conjectured that in this country alone not less than 150,000 able-bodied men, willing to work, are unable to do so; and it is to be feared that the present season may produce a state of misery such as has never yet been paralleled in this country. Vast numbers of labourers have certainly

emigrated to British America and to the United States; but already those countries are complaining of the shoals of destitute persons that they have to keep from starvation; their labour market, like our own, being overstocked. A petition to Parliament from British America is receiving signatures, praying that no more labourers be sent out there, and drawing a dreadful picture of the want and misery to which those who have emigrated without capital are exposed. But to turn to another and a brighter clime and picture. The latest advices from South Australia are most cheering, and the want of labourers there is causing as great a stir as the over-abundance of poor in this country; and a petition, signed by the greater part of the colonists, has either arrived, or is on the passage, praying that the poor of this country may be sent out to them, and bitterly complaining of the indifference with which their former prayers for labour have been received. In addition to their petitions, they offer to pay for the passage of the poor, and pledge themselves to find them in work, with better wages and more food than they can expect to get at home. I can safely assert that during a residence of seven years in South Australia (with the exception of about eighteen months, when the colony was overburdened with government debts), I have never seen or heard of a common beggar, or any person who could not obtain sufficient food; and I am convinced that the condition of the labourer in that colony is many degrees above that of the man in constant employment in England.

The South Australian newspapers complain, and with great justice, of the many frauds committed by persons proceeding free to the colony in the emigrant vessels. They state that certain emigrants, who obtain a free passage at the expense of the emigration fund, rendezvous at the port without any intention of settling in the colony, making use of the bounty simply as a means of transport to their friends in the neighbouring settlements. The impropriety and injustice of the fund being used for such a purpose are obvious; for the money thus alienated and wasted has been paid by the South Australians on purpose to bring labour to their shores, where it is so much needed. It is, indeed, difficult to put a stop to the practice alluded to, unless an agreement be entered into with the intending emigrants, making it obligatory upon them to pay back to the fund the price of their passage, in case they leave the colony before a certain time has elapsed. Such a bond would, I believe, at once arrest this scandalous mode of peculation. To do this is of primary importance, for labour is the grand desideratum in the colony, and it is for want of a sufficiency of it that the produce of the country in many parts is rotting upon the ground and worse than useless; a melancholy return to the industrious farmer, instead of that interest which he had anticipated for the labour and care bestowed upon his land. This destruction of valuable produce is taking place, let us remember, at a time when hundreds of thousands in England, Scotland, and Ireland are in danger of starving for want of work to supply them with food. The emigration to South Australia is loudly

called for, and the demand for labour is so great, that many ship-loads of persons might be provided with permanent work the day after their arrival. I confess it is surprising to me, that in the midst of the distress, pestilence and death which are stalking abroad over the United Kingdom, the poor are still unwilling to trust themselves to that new land, where the comforts they would enjoy are ten thousand times greater than they can possibly expect here. England is a land teeming with wretchedness and beggary; in South Australia the beggar is unknown. In England, even if work be found by the labourer, the money he receives in wages, in consequence of the price of provisions, is quite inadequate to provide him with good wholesome food; much more with warm and comfortable clothes.

In South Australia every man, woman and child of ten years of age is able to earn sufficient food and clothing, and in a short time, with care and economy, to save enough to keep the wolf from the door in time of sickness, if such should come. Many poor but industrious men emigrate thither without a shilling, and in four or five years afterwards are substantial farmers. Were it required, I could mention names, and give many instances; but it must be observed, that none but sober, honest and hard-working men can save money in this way; others have very little prospect of raising themselves above the common herd *.

* Last August a voluntary subscription of 1,000*l.* from the people in South Australia, was sent to England for the famishing Irish, and accompanied by a promise to send the same

An Adelaide paper, the *South Australian Register*, speaking of the want of labour, remarks: "No amount of labouring population, which either a sustained enthusiasm on the part of our friends at home, or the miraculous conversion of the emigration commissioners and the Colonial Office into stanch and active friends of this colony, would be at all likely to favour us with, will, according to our conceptions, reach one tithe of the quantity for whom constant employment at good, fair wages would most assuredly be found within our ample borders for many, very many years to come. Want of hands is just now the universal cry. The corn that is at this moment ripe for the sickle within a circle of three or four miles' radius from Adelaide would employ, we are informed, from two hundred to three hundred men for the next five or six weeks, at the rate of from twelve to fourteen shillings per acre, and yet the labourers are nowhere to be found with sufficient readiness. The recent arrivals, large though they may sound to the good folks in England, here proved but a drop in the bucket, '*the small dust on the balance, a very little thing.*'" This was written in December 1846; and the fact of much wheat being uncut, and therefore lost, proves that the writer was correct in his statements. He continues as follows: "Under these circumstances, we do feel that the colony has abun-

amount in wheat. Of this sum 500*l.* was collected during two days; from which it would appear as if there were no scarcity of money, or food in the country, since the above subscription amounts to the sum of *one shilling and sixpence for every man, woman and child in the whole colony.*

dant excuse for any amount of indignation which it may manifest to those false, though professing friends in London, whose absurd notions on this vital topic may possibly have had the effect of diminishing the number of persons who would otherwise have been at once forwarded to our aid. We implore all those gentlemen in England, who are interested in promoting the welfare of South Australia, to dismiss from their imaginations any such 'chimæra dire' as that the colony can be overstocked with labouring emigrants. In the ordinary course of events it is a sheer impossibility."

There is great truth in all this; and it is my opinion, founded upon experience, that such is the favourable position of the colony, and such the demand for extra labour, that ten thousand persons, including women and children, would not cause the least surplus population on its fertile lands.

We may here properly introduce an extract from "An Address to the Starving and Suffering Millions of Great Britain and Ireland," by J. Stephens, Esq., editor of the *Adelaide Observer* and the *South Australian Register*, published on the 30th June, 1847.

"Hear me, ye sons of toil," says Stephens, "and judge for yourselves from the following facts:

"1st. The local government has 28,000*l.* in hard coin in its coffers to spend in public buildings, in bridges and in harbour improvements, in road-making and repairs, nearly all of which are at a stand-still for want of contractors to undertake them, and artisans, skilful workmen, or labourers to do their work.

"2nd. Merchants, storekeepers, and capitalists find it difficult to build new warehouses, shops, and dwellings, or to enlarge or improve their present ones, not for want of money, but for lack of men.

"3rd. Mining proprietors and their operations are kept in check, and in many instances mines have been closed, owing to the insufficiency of labour or the extreme demands of miners and others employed.

"4th. Farmers, who have numbers of spare oxen, horses, and ploughs, cannot break up so much land as they had succeeded in getting inclosed, still less take more into cultivation, for want of men to hold the plough, and of boys to drive.

"5th. Stockholders and sheep farmers are continually on the look-out for more men and boys to attend to their increasing herds or flocks; to form new flocks from their tens of thousands of weaned lambs, and to drive the additional teams required by the constantly increasing intercourse and traffic to and from the secondary towns, mines, and out-stations. At this present moment some sheep farmers, out of sheer inability to find shepherds and mates enough, talk of boiling down portions of their flocks for tallow.

"6th. We are monthly importing thousands of pounds' worth of building materials from the neighbouring colonies, because we have not men enough to hew, saw, and split, and attend to the carting down of the timber and split stuff obtainable in our extensive forests. I may likewise mention that we have many kinds of wood suitable for furniture. The quarries yield building materials in great abundance

and variety, the slate produced being excellent for roofing and flooring purposes. Limestone is plentiful, and clay for the potter and the brickmaker is almost every where to be found. Finer clays have also been discovered in a state of great purity.

"7th. Many useful manufactures might be profitably added to the existing ones, but the obstacle again is the want of available and experienced hands.

"8th. As for the domestic servants of the softer sex, although in this colony they are considered better off than in any other part of the world, yet many worthy employers say that they cannot get any female servants for love or money. The fact is, that virtuous and well-conducted young women seldom remain long unmarried, the wife-seeking South Australians seemingly caring little for dower."

The following is the condition of the labour market, according to papers dated in Australia in February 1847 :—

Bricklayers, in great request, and earning from 6*s.* to 7*s.* per day.

Blacksmiths, a few wanted, at from 5*s.* to 6*s.* per day.

Bakers, with board and lodging, 20*s.* per week.

Brickmakers, in demand, wages from 12*s.* to 14*s.* per thousand.

Carpenters, in great demand, at from 5*s.* 6*d.* to 6*s.* 6*d.* per day.

Cabinet-makers, in demand, wages 5*s.* 6*d.* to 6*s.* 6*d.* per day.

Coopers, in great demand, and readily obtain from 5*s.* to 7*s.* per day.

Domestic servants, not to be obtained, wages offered, from 5*s*. to 7*s*. per week.

Engineers, working, all engaged, at from 6*s*. to 7*s*. per day.

Gardeners are much wanted, wages, varying according to ability, from 10*s*. per week with full rations in the country, to the town rate of from 18*s*. to 21*s*. without food.

Labourers, in town, without rations, 18*s*. to 22*s*. per week; in the country, with rations, 10*s*. to 12*s*. per week. At present, if an extra day labourer is wanted, it is almost impossible to obtain one.

Miners, at day work, are paid at the rate of from 30*s*. to 42*s*. per week. At tut work, tribute, or tow work, the earnings of miners have been considerable.

Masons find employment very brisk, and can earn, according to ability, 5*s*. 6*d*. to 7*s*. per day.

Plasterers find plenty of employment, at from 5*s*. 6*d*. to 6*s*. 6*d*. per day.

Painters, not in great request, wages from 5*s*. to 6*s*. per day.

Quarrymen labour under great temptation to turn miners, but they can earn at their own employment from 21*s*. to 25*s*. per week.

Reapers are by no means thrown out of employment by the reaping machines. Many farmers still prefer the sickle, and are willing to pay more for hand labour in the field than the charge for machine work. The price paid reapers during the last harvest was 12*s*. 6*d*. and rations per acre.

Shoemakers, including *bootmakers*, find employ-

ment plentiful, and, in proportion to their ability and diligence, can earn per week from 25*s.* to 45*s.*

Sawyers are almost invariably paid by the 100 feet *super;* the price being, for deal or cedar, 7*s.* 6*d.*; for gum or other hard woods, 10*s.*

Splitters are much in request; the prices are, for posts and rails for fencing and taken on the ground, from 16*s.* to 20*s.* per 100; shingles, 3*s.* per 100; broad paling, 10*s.* per 100; laths, 8*s.* per 1000.

Sailors employed in the colonial vessels are paid about 2*l.* 14*s.* per month.

Shinglers are paid, at per square of 100 feet *super,* from 4*s.* 6*d.* to 5*s.*

Shepherds. There is no end to the demand for shepherds to meet the natural increase of the flocks; the hut-keepers, who have scarcely any work to perform, and are mostly very old men or young lads, earn from 18*l.* to 20*l.* per annum, in addition to their food, and the shepherds' wages vary from 10*s.* to 15*s.* per week, also with rations. To deserving men various encouragements are held out, extra allowances given, and many a good wife is paid as well as fed for being her husband's hut-keeper.

Sadlers and harness-makers find full employment; but almost the highest wages given are 35*s.* per week.

Tailors are paid at from 7*d.* to 8*d.* per hour.

Tinmen are not in great demand; wages, 30*s.* per week.

Teamsters, sober and careful men, accustomed to drive either bullocks or horses, will find a choice of

employment, with good wages, and encouragement. The Burra Mining Company alone is paying more than 100*l.* per day for cartage to and from the mine.

Upholsterers, working. A few are much wanted, and might readily obtain 42*s.* per week, the demand for mattresses of various kinds, as well as of other upholstery articles, having become very pressing.

Wheelwrights are numerous, but fully employed at 5*s.* 6*d.* to 6*s.* 6*d.* per day.

Well-sinkers are in great request at a good rate of remuneration, most of the old hands having gone to the mines.

Watchmakers (journeymen) not wanted; present wages, 31*s.* to 35*s.* weekly.

The following extract is taken from the *South Australian Register* of July 1847, and shows the present want of labour to be as great as it was a few months since. "We can offer to the distressed and pent-up population of the mother-country, or of Europe, full employment, liberal wages, cheap and plentiful food, a fertile and a healthy country, and abundance of land at a moderate price. To this picture of the advantages of the colony we know of no drawbacks, unless the habits of the emigrants and the occasional inability to resist the temptations to excess, furnished by the unwonted circumstance of possessing money beyond what is required for mere support, be considered as such. We believe that there is not at the present moment in the whole range of the British dominions a more promising field for colonisation than is presented by this pro-

vince, nor one in which the success of the emigrant would be equally certain, easy, and rapid."

Many persons, whose previous habits unfit them for emigration to the Australian colonies, proceed thither with much conceit of their own abilities, and with absurd notions of the country they are seeking; which causes them inevitable disappointment on their arrival, and probably leads them to make incorrect representations of the colony, to its great injury in the minds of others. The peculiar advantages that our colonies afford, in the matters of obtaining a living and making money, are but little understood by the generality of persons in England, and therefore the experience of one who has passed some years in South Australia may be useful and advantageous to the intending emigrant, if not to those who are at present settled there. The class of persons most required are those who either have been accustomed to manual labour, or who have made up their minds to serve themselves by engaging in any occupation that may call for their exertions. Adelaide, like most towns, has a plentiful supply of professional men, as well as of merchants, shop-keepers, and persons fond of the "light businesses" proper to the civilised state, but these constitute only a small portion of the 25,000 souls in the colony; being, however, at present ample for its wants. The persons most useful to the country, and therefore to themselves, will be those who have had some little insight into country work, and especially mining, of either of which occupations abundance may be easily obtained

by competent practical workmen. Persons arriving in the colony with money sufficient to enable them to live in England in a very economical style, will find that they can now afford all the comforts of home more cheaply than in the mother-country, there being no taxes, rates, or other claims upon lands or houses, and moreover the prices of all kinds of necessary food are much less, consequent upon the greater supply. Articles of furniture also are hardly dearer there than here. So great a number of well-educated young men have gone out, expecting readily to obtain good situations in offices or counting-houses, but have not succeeded as clerks, that I should strongly advise this class not to emigrate with any idea of pursuing their customary avocations, or, in fact, without a well-founded intention of taking whatever employment offers; for it is but too likely that, unless they are accustomed to manual labour, or can make their minds up to it, they will fall into great distress. Those persons who emigrate with but small sums of money must not expect to have many luxuries, but all have it in their power to obtain general comforts, which depend entirely upon industry and perseverance, in the exercise of which the emigrant is certain to succeed.

As for professional men, I repeat that South Australia is overstocked, and, indeed, many of that class are now living in the Bush, engaged in either agricultural or pastoral pursuits, and earning more by that mode of life than they could do in the town or settled districts by their own profession. The medical men that I have met, I have invariably found

willing to do any good in their power, and some of them are living in districts among farmers and labourers, at a great distance from any practising surgeon, and, therefore, are much in request; but they cannot depend upon physic for a livelihood.

On the first arrival of the farmer in Adelaide, he will encounter temptations which he must endeavour to overcome; in fact, it requires the greatest firmness to avoid the many snares that he is exposed to at the hands of those who endeavour to make a living by preying upon the new comer, and who, by glowing descriptions of articles that they have for sale, endeavour to lead him into foolish and unprofitable speculations, and, when they have gained their vile end and caused his ruin, with barefaced impudence make a boast of their unprincipled cleverness. Many sharpers of this kind are found in Australia as well as other countries among all classes; and they are mostly those who on their arrival were themselves stripped and robbed of all they had, and therefore consider that they have a right to prey upon the new comer: cheating him they call *making him colonial,* and many there are who in a very few months are as colonial as need be in this fashion. I would wish to impress most strongly upon the minds of all emigrants the necessity of constantly being on their guard in all their dealings, until they become conversant with the price of goods. It is not uncommon to meet with men of the greatest respectability, who had arrived in Adelaide with a sum of money sufficient to start them in a decent and comfortable occupation, and to sustain them for life, yet who, by unfortunately falling into

the hands of the sharpers, have lost their all, and are now existing in the colony by manual and menial labour: this is so frequently the case, that the traveller will seldom pass a station without meeting one or more of this class, of whom too many, in order to drown the recollection of what they have been, engage in all kinds of dissipation, until they sink beyond redemption or hope.

What has been intimated about the necessity of caution in making acquaintances applies, indeed, not only to Adelaide, but to every part of the world; and, in one place equally with another, the man who cannot look after his own affairs will seldom profit by any advice that may be given to him. Every person tries to buy and sell at a profit, and he who gets the best bargains is the cleverest; and the buyer, if afterwards disappointed in his bargain, often thinks the other a sharper, as indeed he is the sharper of the two, or he would not have advantaged himself. The common rule—*every one for himself*—holds good without distinction of country, and therefore in Adelaide as well as in Europe. Every man goes out to make money as quickly as he can, and of course every opportunity of doing so is greedily accepted. Therefore, with the most earnest desire to benefit the emigrant, I can only say to him, "Look out for yourself, and, if you meet with a man who tries directly or indirectly to cheat or rob you, beware of him in time; act upon your own understanding, and make your way honestly and respectably whatever you may be engaged in, and wherever you may be, whether in the busy city or the lonely Bush."

The married man has many and great advantages

over the single, and his home (however homely it may be) will contrast favourably with the bachelor's; not only is his happiness enhanced and his labour cheered, but, besides this, an active woman does many things for her husband which he can find neither time nor inclination to do for himself. I should say, therefore, to all settlers or intending emigrants, "*Get married before going out*, as the cheaper and better course; but, before you marry, tell your intended the mode of life she may expect, that there be no surprise manifested when it is too late to change." Viewed only in a mercenary and politic light, the wife is a great saving to her husband; if he is poor, she cooks for him, makes and mends his clothes, keeps his house in order, looks after the poultry, and does a host of little things that he must unwillingly resign if deprived of her assistance. Thus she is a profit and a great help. But when he returns fatigued with his daily labour (and people do not *play* out there)—when, weary and languid, he comes in sight of his hut—his heart warms at the comforts he knows he will meet, and the light shining out through the crevices in the door, walls and roof cheers his very soul, and he feels happy that she—the preparer and crown of all this additional happiness—is anxiously waiting to receive him. When he opens his door (no bolts or bars are wanted where there are no thieves or bush-rangers), his clean hut and smoking supper (not mere potatoes and salt) make him think that, if he should be so unfortunate as to lose his present helpmate, he must either break his heart at once, or get married again directly.

Equal inducements exist for the rich man to marry

as for the poor. Though wealthy as Crœsus, what would he be in the Bush without a wife to cheer him in his misfortunes and troubles, and double his joys by sharing them? In either case, a bachelor in those wilds is an object of pity. No place under the sun is better than Australia for observing the genuine bachelor; there he sits in his lonely hut, with his little "notions," as the Yankees call them, ranged about; and, if you pop upon him unexpectedly, you find him, unless he keeps a servant, washing, mending and ironing his own linen; making and baking his bread, from which he hospitably turns to broil a chop for you with all the gravity of an old cook; every thing about him looking as if it wanted a few children and a wife to rummage it about, and rub and round him into a sociable and "happy man."

As we said before, miners are greatly in request in consequence of the extraordinary extent of mineral land lately discovered, and to work which to advantage requires persons who thoroughly understand their business; were it otherwise, the mining operations would be easy enough, and indeed they are in some places most simple. The ore is often found in large masses upon the surface of the ground; but when this superficial ore has been removed, and sinking shafts and driving adits or levels become necessary, mining knowledge and experience are demanded, and also workmen who are both willing and able to obey the orders of their superiors. Without real practical knowledge, the mine will probably fall in, and become a dead loss in more ways than one. The miners earn

large sums, and may depend upon constant work. In 1846, eight workmen earned as much as 375*l.* during a period of nine weeks, being nearly five guineas a week each; this was at the Burra Burra, one of the largest mines ever known either for extent or richness, the ore yielding a high percentage of copper, and realising about 24*l.* per ton at Swansea. The hours of work for the miners are generally eight out of the twenty-four, so that plenty of time may be found to cultivate a garden, the land for which will very readily be allowed without any charge; the miner may do this, or any other work he prefers, and at least can supply himself with vegetables and fruit, as melons, which will grow almost any where.

Few countries offer such inducements to either the farmer, the miner, or other labourer. The air is pure and salubrious, work of all kinds abundant, food and the necessaries of life cheap and in great plenty, as the returns and statistics of South Australia testify.

As regards farming, one great comfort to the inexperienced is, that the system of farming and grazing is remarkably simple, and requires but little knowledge to exercise; in this respect it offers quite a contrast to agricultural qualifications in England. In South Australia, the English farmer finds his greatest difficulty to consist in unlearning much of the knowledge he has acquired in the mother-country. For the land almost no dressing is required; if wanted, however, it can be abundantly procured, and the succession of crops is easily understood; wheat is grown this year and wheat the next, until the land is impoverished, which is likely to take some time, for six or

seven crops are raised for as many years in succession, without any sensible difference in either the soil or produce. Sheep do not require housing, stall feeding, or even to have food grown for them, but find their living on the open unoccupied lands, and on this account are much less expensive than in this country. Cattle are still less trouble, roaming about on extensive runs of good pasturage, and not subject to those diseases that have done so much damage, and carried off so many head, throughout Europe. All kinds of domestic animals are living in the colony very nearly in their natural state, which of itself accounts for their freedom from many complaints that are engendered by housing in confined buildings, and by living on artificial food.

"We have been accustomed to hear frequently in England of the necessity of a choice of free emigrants, and of the desirableness of exercising that choice in the rural districts alone; latterly this delusion has been expelled, and it is ascertained, from experience, that the most inveterate townsfolk may be not only ruralised in Australia, but become most useful auxiliaries in its nomadic pursuits. It is strange, but true, that recruits for the bullock-driving service are selected, whenever possible, from the ranks of London cockneys, and these display no lack of teachableness; transplanted from their native foggy atmosphere to a more genial clime, their joints become as supple as the bullock-whips put into their hands, and a regular and plentiful 'tuck-out' of solid flesh and wheaten dampers, soon makes them fat and saucy enough to

talk to any thing, biped or quadruped." So says the *South Australian Register*, and it speaks the truth.

The markets in Adelaide are well supplied, and equal to those of small country towns in England. The cattle market is about half a mile distant from the city of Adelaide; all meat for the use of the town is there killed, whereby the city (unlike "the Great Metropolis") is kept clean, wholesome and undisturbed. Fish is generally plentiful and cheap. There is a kind of cod brought from the Murray River; it is a fresh-water fish, much admired, and not unlike its English namesake in flavour; snapper, guardfish, bream of from four to five pounds' weight, mullet, and crayfish are abundant; as well as oysters, but the latter very inferior to the English. Vegetables are both plentiful and cheap. There are potatoes good and, as far as my own observation has gone, undiseased, and not to be excelled in any part of the world; they sell at from 3*l.* to 4*l.* per ton; the crop they yield is often enormous in certain places, as much as fourteen pounds of potatoes being attached to one root; I need not say, however, that this is not the average. Cabbages, carrots, peas, beans, parsnips, capsicums, and, in fact, all the known varieties of vegetables in Europe, and most of those in tropical countries, grow in the colony in the greatest luxuriance. This is the case also with the different fruits, among which the various melons rank first, both on account of their flavour, size and easy growth, and also from their refreshing qualities in a hot climate; water melons often weigh as much as

thirty-five pounds each, and are brought in waggons and drays to the town, piled up like the Swedish turnips coming to market in England. I bought sweet melons, just before I left Adelaide, weighing about fifteen pounds, for sixpence, and water melons much cheaper; in fact, both kinds are extremely abundant. Then there are grapes, peaches, apricots, nectarines, apples, pears, plums, figs, and all English fruits, also many tropical kinds, as oranges, lemons, and citrons. These fruits, with the exception of the melon, are scarce; but in two or three years the trees that have been planted will be in full bearing, and their produce will doubtless be plentiful.

Tobacco is largely grown in some places, and seems particularly adapted to the soil; it has been manufactured in a few instances, but has not succeeded to the extent promised by its luxuriant growth. This partial failure has been occasioned by the parties trying it not being accustomed to the modes of preparation required; on which account, also, they have difficulty in *sweating* it, to remove the nitre and make the herb mild and pleasant to the taste.

Although tobacco has not been extensively manufactured for smoking, it is in great use as the basis of a lotion for diseased sheep; for which purpose alone some tons are annually sold. The cultivation of tobacco is simple, and requires but moderate care to bring the plant to perfection, and it will well repay any amount of attention bestowed upon it. I do not, however, say that all spots of good land will produce the same quantity of tobacco; in fact, the black rich alluvial soils alone should be tried for its cultivation.

CHAPTER II.

EMIGRANT SHIPS.—FARES.—FREE EMIGRANTS.—ARTICLES REQUIRED BY GOVERNMENT EMIGRANTS.—RULES ON BOARD SHIP.

THE opportunities of proceeding to South Australia are frequent, and generally at least one vessel of from five hundred to seven hundred tons leaves England for Adelaide every month. The ships employed on that service are mostly good, and moderately fast sailing; but, before taking a passage, some inquiry should be made as to the latter qualification, for a few weeks more or less make all the difference to the pleasure or comfort of the voyage. The passage to nearly all persons is unpleasant; but, being unavoidable, the most sensible plan is to make the best of it, and to take such articles as will enable the passenger to spend his time with some little satisfaction to himself and his fellow-companions in trouble. The rate of passage is usually rather lower than to other parts about the same distance, as India and China; namely, for the cabin, from 60*l.* to 80*l.*, for which sum the passenger is supplied with good provisions and abundance of wines and other liquors; he has also a sleeping cabin, but this he is expected himself

to furnish with bedding, washing-stand, chair, lamp, glass, and any other articles he requires,—all which cost but little (about 12*l.*), and, if bought with a view to solid use, will be acceptable when he arrives at his destination. Let these articles, therefore, be strong and plain, and made of seasoned wood. Second-hand articles are good for the purpose, and, being aged, stand the heat of the climate better, without warping or cracking like the flimsy things sold at ready-made shops. A good chest of drawers is useful on board, and helps to furnish the house on shore much better than the rough deal packing-cases in general use for carrying out clothes and books. All the goods taken out should be compact and strong. Families proceeding to the colony with considerable sums of money will probably disregard these hints; but to the poor man they may be invaluable. The outfitters furnish the intending emigrants with long and useless lists of goods, which at sea are in the way, and on shore soon drop to pieces. The fewer articles of any kind taken out the better, for almost every requisite can be obtained in Adelaide; the article of articles there is money. The poor man who goes out to earn money by farming, or other employment, will do well to resign the chief cabin to those who can afford it better, and take his passage in the intermediate cabin, which will cost about one-half the other; he will certainly miss some paint and gilding, but this will do him less harm than the 30*l.* or more will do him good when he puts his foot on shore, and he will be as comfortable on the whole, if he only endeavour to make himself contented with

his accommodation. The food, if not rich, is yet good, plentiful, and wholesome, and not so different in quality as might be expected from the great difference in price between the first and second cabins. A reduced sum should be charged for a man and his wife occupying the same cabin; but this must be arranged to the satisfaction of the parties before concluding the agreement. A few books are most acceptable on board, and these should be kept apart from the general luggage not wanted on the voyage, which will be packed away in the hold, and most likely not be seen again until the ship arrives out in the colony. Drawing, painting, music, and other suchlike recreations are found very practicable during fine weather, and great resources during the long calms and light winds that are often encountered, and which are so dispiriting, that some amusement should be specially provided to counteract their effects.

I wish particularly to caution all persons going out not to leave their warm clothing at home, under the impression that it will not be required in the hot climate of Adelaide, for sometimes the cold is severe enough to render such clothing very desirable: it is true that the cold is never so piercing or severe as in England; yet the changes of temperature are frequently more felt, on account of the heat during the greater part of the day, which renders the frame very susceptible. It is, indeed, common to tell emigrants that Adelaide is too hot to wear any thing but very cool, light clothing; such is not the case, for, although at certain times the heat is great (above

one hundred and twenty degrees in the sun), yet at other times the evening air is cold, and during the wet weather a good fire is wanted. I have known a night's frost severe enough to leave ice in the morning as thick as a shilling; but only once, and this was near Mount Barker, which is notoriously a cold situation. After such a night as that (which is felt so much the more from the preceding heat), the person who was not provided with suitable warm clothing would not soon forget the omission.

Many curious articles are taken out, which one would never have thought of discommending, such as skates, of which I recollect two or three pairs having been brought by different emigrants. In the subsequent pages I have mentioned the guns that are intended to shoot the blacks and bushrangers, and hundreds of which are brought out to the colony and never afterwards see the light, except perhaps in some out-house, where they make a roost for fowls. If any thing of this kind were wanted, a good double-barrelled gun should be preferred; but even these, I think, it would pay to buy up about Adelaide and send to England for disposal: almost every person takes out one or more, and almost nobody uses them, except indeed for quail shooting, in case parties have nothing else to do but pass their time. As for the generality of the natives in the districts inhabited by the white people, they are perfectly quiet and submissive, and do not require shooting to keep in order, and there are no bushrangers in the colony. So much at present for guns. Shoes made in England are found to be very inferior for use to those made in

the colony, which arises neither from bad leather nor bad workmanship, but from the damp and mildew they are sure to collect on board ship, and which rots them to an extent that renders them totally unfit for use. When I sailed from Adelaide to return to England, I thought that colonial boots and shoes might stand the voyage better; but these went the same way, and therefore I should advise all persons to take out only sufficient to last them while on board the ship: these, again, should not be heavy, for light pumps or boots will be much more comfortable. The emigrants may rest assured that all such articles are to be obtained on their arrival, both good and cheap; they are made of leather tanned in Adelaide, which leather is very enduring, and the workmanship capital. With cloth clothes the case is different, and those who intend wearing them should take a stock out, for they are very expensive in the town, and not always to be obtained made with superior materials; cloth clothes, however, are seldom worn, except by professional men and a few others, as they are sometimes very undesirable on account of the heat. The more usual, and also more comfortable, dress is the brown holland blouse, with light trowsers and waistcoat, a straw hat, black or coloured neckerchief, and the shirt-collar turned down, in order to give all the air and coolness possible in the hot weather; this dress is adapted in strength for those who intend to work either for themselves or a master. Instead of the blouse a light shooting coat may be worn, and moleskin or cord trowsers in place of the more expensive kinds.

I advise passengers to get every thing properly secured in their cabins or berths, and put into its place, before the vessel starts on her voyage; otherwise, if bad weather comes on, their boxes and other goods will roll about, and many things may be broken which it is not in their power to replace during the remainder of the voyage. A carpenter will charge but little to see all the boxes well fastened down with cleets or lashings, and his services will be found worth their cost; for, if sickness overtake the unfortunate passenger, he will have very little energy to secure his packages, and not unlikely will wish them all at the bottom of the sea so long as they annoy him: on the other hand, it only requires a little forethought to provide against this, and make all things comfortable and secure, so that on the first night on shipboard he shall find them where they ought to be.

As the demand for labour is so great, and wages are also good, the intending emigrant should lose no time in taking his departnre. The capacity to read and write well are often great inducements for masters to employ some one or two men in superior places, and all emigrants will find themselves more pleasantly situated in the colony if they can beguile their leisure time by reading: therefore, I think, much permanent good might be effected by supplying the emigrants, who go out through the Emigration Fund, with slates and a few useful books, in addition to the Bibles that are given; nay, it would cost but a trifle for the people themselves to procure these articles. In ships proceeding out under the Emigration Com-

missioners, a schoolmaster is engaged from among the emigrants, and he teaches any that are willing to learn, and many are found to embrace the opportunity. The ship in which I went out to Australia had emigrants on board, some of whom seemed glad to receive instruction, and learned sufficient of reading and writing, on the voyage, to fit them for a storekeeper's or overseer's situation.

Labourers and other poor people who have not the means of paying their passage are sent out at the expense of the colony, which appropriates a portion of the money received for land sold there, to bring such persons to its shores. These people, therefore, if approved of by the Emigration Commissioners, are allowed a free passage, and every care is taken to render them as comfortable as possible while on board the ships; they are required to find their own clothes and bedding, but are supplied with wholesome food in ample quantities. The ships have berths for sleeping, ranged along both sides of the under deck, and in the centre long tables are fixed, reaching from one end to the other, on each side of which are placed forms for the emigrants to sit down upon when at their meals or otherwise employed. Safety lamps are suspended from the ceiling at given distances; and when they are lit, which is done at a particular hour every evening, there is light enough throughout to read by, or to enable the passengers to engage in any other occupation that may help to pass their time pleasantly away. An experienced surgeon is paid to attend the emigrants who require his aid, and the whole of those who go out

free are under his command; to him they must look for redressing any grievances they may have, and his orders they must obey. In order to guide him in his duties, he is supplied with printed instructions from the Commissioners, which instructions enable him to enforce obedience to his orders. All the ships are well supplied with medicines and nourishing food for the sick, and every attention is paid them. In a word, if the emigrants will but try to live happily, it is easy for them to do so. Sunday is set apart as a day of rest, the Church Service being read by the surgeon, who acts as a clergyman if there should not be one among the passengers, and the worship is conducted so as to make it impressive. The surgeon has particular orders to see that the greatest cleanliness is observed, which is very important, because, among so many, constant fevers would otherwise break out, and place the lives of all on board in danger. Besides the surgeon, a superintendent is appointed to report to the former any complaint, or any improper conduct that may be going on, and to see that every person has his due allowance of food served out to him by the steward; it is also the superintendent's office to see that all parts of the vessel are as well ventilated as circumstances will permit. A schoolmaster too, as I said before, is chosen, and he is paid for his trouble when he arrives in the colony; but it is in the power of the government there to withhold his salary, and also that of the surgeon and superintendent, if they have neglected to perform their duties.

Some emigrants seem to imagine that even the

most simple utensils are not to be procured in such an inhospitable desert as they picture the colony to be, but they are greatly mistaken as to the fact. The following, however, is a list of the articles required on the voyage itself by the working classes proceeding to Australia. It is printed by the Colonial Land and Emigration Commissioners, and states the minimum of clothing that any one is allowed to embark with:—

"SINGLE MAN'S OUTFIT TO AUSTRALIA.

2 beaverteen jackets, 1 to be warm lined.	1 Brazil straw hat.
2 beaverteen trowsers, 1 to be warm lined.	6 striped cotton shirts.
1 waistcoat with sleeves, warm lined.	1 pair boots
1 ditto without sleeves.	1 pair shoes.
2 duck frocks.	4 handkerchiefs.
2 duck trowsers.	4 worsted hose.
1 Scotch cap or thrasher's hat.	2 cotton hose.
	1 pair braces.
	3 towels.
	Razor, shaving-box, and glass.

"NOTE.—For use on the voyage, shoes or slippers are much more convenient than boots.

"SINGLE WOMAN'S OUTFIT TO AUSTRALIA.

1 warm cloak, with cape.	4 pocket handkerchiefs.
2 bonnets.	2 net ditto for neck.
1 small shawl.	3 caps.
1 stuff dress.	4 night caps.
2 print ditto.	4 sleeping jackets.
6 shifts.	2 black worsted hose.
2 flannel petticoats.	4 cotton ditto.
1 stuff ditto.	2 pairs of shoes.
2 twill cotton ditto.	6 towels.
1 pair of stays.	

"Each person would also require—

1 knife and fork, 1 deep tin plate, 1 pint tin drinking mug, 1 table-spoon, 1 tea-spoon.

2 shoe brushes.
1 pair of blankets.
1 counterpane.
1 strong chest, with lock.
} A married couple require only one set of these articles.

2 lbs. of marine soap.
1 comb and hair brush.
1 pair of sheets.
2 pots of blacking.

	£	s.	d.
Cost of above outfit for a single man, about . .	5	10	0
Ditto ditto single woman . . .	6	0	0
Ditto ditto married couple . . .	11	0	0

"The cost of an outfit for children varies with their size. Generally speaking, three children under 7, or two between that age and 14, may be clothed for about 5*l.*; but a well-grown girl or boy of 13 years of age will cost nearly as much as an adult."

The following "Hints to Free Emigrants" are also published by the Government, and may be obtained at the Emigration Office, Park Lane, Westminster, together with any other information required.

"If approved of, the emigrants will receive a passage as soon as the arrangements of the Commissioners will admit. But due notice will be given to them of the ship by which they are to sail, and of the time appointed for sailing; and unless they receive such notice they must, on no account, withdraw from their employment, or make any preparation for departure.

"The expense of reaching the port of embarkation must be paid by the emigrants.

"Before the embarkation order, entitling them to a passage, is issued, 1*l.* must be paid for every person above 14, and 10*s.* for every child above 1 and under 14, which will be retained to meet the expense of bedding and mess utensils which will be supplied for them.

"Provisions and cooking utensils will be found. The emigrants will also be provided with new mattresses, bolsters, blankets, and counterpanes, and with canvas bags intended to contain one month's linen, &c.; likewise with a knife and fork, two spoons, a metal plate, and a drinking mug, the whole of which articles may be kept by the emigrants after arrival in the colony. But they must bring their own sheets and towels, also a supply of soap.

"The emigrants must bring their own clothing, which will be inspected at the port by an officer of the Commissioners; and all parties are particularly desired to observe that they will not be allowed to embark unless they provide themselves with a sufficient supply for their health during the voyage. The lowest quantity that can be admitted for each person is as follows: For MALES, six shirts, six pair of stockings, two ditto of shoes, and two complete suits of exterior clothing. For FEMALES, six shifts, two flannel petticoats, six pair of stockings, two of shoes, and two gowns.

"It is desirable that emigrants should take out with them the necessary tools of their trades; bulky

agricultural implements, however, cannot be admitted, on account of their inconvenient size and weight; neither can furniture be received on board; mattresses, especially, and feather-beds are strictly prohibited.

"The emigrants will be at perfect liberty to engage themselves to any one willing to employ them, and to make their own bargains for wages in the colony. No repayment is required from them for the passage out. The only return expected is a strict observance, on board, of the regulations, framed with a view to their health and comfort during the voyage, and general good conduct and industrious habits in the colony."

The following is a list of articles which will be wanted by cabin or intermediate passengers for their use on board, and which will also be found useful on arrival in Australia in addition to those clothes in common use in England. These articles are intended for a married man and one or two children:—

	£	s.	d.
1 double mattress and bolster	3	0	0
1 single ditto ditto	1	10	0
4 pillows	1	4	0
4 pair large blankets	4	0	0
3 counterpanes	1	2	6
12 pair sheets	6	0	0
24 pillow and bolster cases	1	4	0
12 night shirts	2	0	0
12 night gowns	1	16	0
12 ditto for child	1	4	0
24 striped day shirts	4	4	0
24 pair cotton stockings	1	0	0
12 pair black ditto	1	10	0
6 pair worsted stockings	0	12	0
2 pair cotton braces	0	2	0
24 towels	0	16	0
*6 table cloths	0	18	0
*2 coloured ditto	0	10	0
6 flannel waistcoats	1	7	0
12 blue serge shirts	3	0	0

	£	s.	d.
4 white jackets	1	6	0
4 ditto trowsers	1	4	0
4 pair cord trowsers	2	8	0
4 light waistcoats	1	0	0
2 pair pilot cloth trowsers	1	10	0
2 blue cloth navy-caps	0	9	0
3 pair half-boots	1	16	0
6 pair women's shoes	1	15	0
6 pair children's ditto	1	0	0
12 handkerchiefs	1	16	0
2 neckerchiefs	0	12	0
6 common dresses	3	0	0
4 ditto for child	0	12	0
12 pair socks for child	0	12	0
3 pair stays	1	4	0
20 yards flannel	1	10	0
12 aprons	0	18	0
Cotton, tape, and thread	0	10	0
Buttons, needles, and pins	0	6	0
Scissors, pens, ink, and paper	1	0	0
Sealing wax	0	3	0
Pewter basin and jug	0	10	0
Water can and cabin lamp	0	10	0
Candles and soap	1	10	0
*Knives, forks, and spoons	3	0	0
*Plates, cups, &c.	3	0	0
Looking glass	0	10	0
*Tea and coffee pots	1	0	0
*Kettle	0	10	0
*Saucepans	0	15	0
Foot pan	0	4	0
Candle box	0	2	0
*3 tea and coffee canisters	0	4	6
*Coffee mill	0	5	0
	£73	13	0

NOTE.—The articles marked thus (*) are not required on board by cabin passengers, but will be useful when in the colony, especially if the parties intend living in the bush.

The following tools (Sorby's) will be requisite. They should be strong, and made of the best materials.

	£	s.	d.
Hand saw	0	4	0
Tenon saw	0	4	0
Falling axe (Australian)	0	5	0
Broad axe	0	4	0
Small axe for meat	0	2	9
Drawing knife	0	2	0
Spokeshave	0	2	6

	£	s.	d.
Screw augers . .	0	12	0
2 hammers . .	0	4	0
Patent gimblets .	0	6	0
2 adzes . . .	0	8	0
Strong plane chisels	0	6	0
Mortising ditto .	0	8	0
Smoothing plane .	0	6	0
Jack plane . .	0	5	0
Saw set and files .	0	4	0
Patent nails of different sizes . .	1	0	0
Tool box . .	1	0	0
	£6	3	3

CHAPTER III.

FIRST ESTABLISHMENT OF SOUTH AUSTRALIA.—EXTENT OF LAND.—PORT ADELAIDE.—POPULATION OF PORT ADELAIDE.—ROAD TO ADELAIDE.—RIVER TORRENS.—PARK LANDS.—THE CITY OF ADELAIDE.—BRIDGES.—POPULATION.—SMALL TOWNS AND VILLAGES.—NUMBER AND DESCRIPTION OF MANUFACTORIES.—CHURCHES.—SCHOOLS.—PUBLIC-HOUSES.—CONVICTIONS OF OFFENDERS.—GOVERNMENT REVENUE.

THE settlement of South Australia was first made into a British province by Act of Parliament 5 Will. IV., chapter 95, in the year 1834; but it was not till the 28th of December, 1836, that Captain Hindmarsh, the first Governor, arrived in the colony. From that time until now the population has gone on increasing, and at present amounts to more than 25,000 souls. South Australia is situated between the 132nd and 141st degrees of east longitude, and extends from the 26th parallel of south latitude to the southern ocean. The coast line is about 1,400 miles in length, and the whole colony comprises an area of about 200,000 square miles, or 300,000,000 acres, and is therefore nearly as large again as Great Britain and Ireland together.

Of this vast region about 800,000 acres have been surveyed, 460,000 of which are sold, and 26,218½ were under cultivation at the end of 1846. A large

extent of good land has recently been discovered, and every year is adding to that already known. Of the whole of the country yet seen, as much as one-third is considered to be available for agricultural purposes, one-third contains valuable mineral productions, besides most excellent runs for cattle and sheep, only one-third of the whole being unfit for farming or grazing. The coast line is very irregular, and is broken by two large gulfs, named Saint Vincent's and Spencer's Gulfs, and by numerous indentations or bays, as Boston Bay, Coffin's Bay, Streaky Bay, Fowler's Bay, Rivoli Bay, Encounter Bay, and many others, some of which afford good accommodation for shipping. The first-mentioned gulf has on its eastern shore a long narrow inlet or arm of the sea, which runs inland in the form of a semicircle. This forms a natural harbour, and is about eight miles long, and navigable for about six miles of that distance for ships of 600 tons' burden. At the mouth of this harbour is a sandy bar, having, at ordinary high tide, twenty feet water; but after passing this bar, which may be done with safety, the water deepens, and continues sufficiently deep up to the port.

The first port was made about a mile farther up than the present one, but, as the water was too shallow there for ships of any great size to come close to the shore, the port has been removed to the present site; again, however, complaints are made, and it is in contemplation to remove it about two miles nearer the mouth, where there is plenty of water and great facility for constructing docks, wharfs, and other con-

veniences. The land where the port is now situated is very swampy for about a mile inland, and large sums of money have been required to make it what it now is. At present the town at the port is computed to contain 1529 inhabitants, and 160 habitations or stores built of stone, 84 of wood, and 76 of other materials. This, however, includes Albert Town, which is about one mile distant. Many of the inhabitants earn a comfortable livelihood by supplying the shipping with the many articles required, and also labour on board the ships, loading and unloading them, &c. The Government and the South Australian Company joined together to render this place available for the shipping of the colony, and as much as 13,400*l.* was expended with that view. The land being so swampy, and covered with water at high tides, the whole of it was required to be raised, and a road had also to be formed for the distance of at least a mile in the direction of the town. This has been completed, and some large warehouses are built fronting the wharfs. A few months since Port Adelaide was a snug little place; but the late papers notice that a destructive fire had done great damage, and consumed many thousand pounds' worth of property. The great defect in the present site is, that large vessels cannot complete their loading close alongside the wharfs, but are obliged to haul off into the deeper water in the middle of the stream.

The existing site was chosen by the South Australian Company, in order to improve their own property, upon which the present port is situated, and the Government agreed to pay a yearly rent to them

for a wharf and warehouse, but afterwards tendered them a certain quantity of land instead of the money, which offer they accepted.

The best wharfs belong to the company; those belonging to the Government are very inferior, and have scarcely enough water alongside to enable the small craft—as schooners and cutters—to lay close up to the landing.

From the port to Adelaide for about a mile, as before stated, the road is over swampy ground, which has been elevated by digging a deep and wide ditch on either side, and piling up the earth thus raised upon the highway.

The soil is here a yellow sandy clay, and is admirably adapted for road-making, being compact and tenacious. This is covered on the surface with good metalling, and fenced on either side with post and rails, and so forms a durable and safe viaduct over the loose soil. On arriving at the end of this made road, the visitor is driven (for cars leave the port every quarter of an hour) through a neat little settlement called Albert Town, in which are about 100 dwellings of all kinds, some of them built of brick, and very comfortable. From Albert Town the road is over a large plain with a gradual rise to the foot of the hills at the back of Adelaide, a distance of about nine miles. This level is all good land, and particularly adapted for agricultural purposes, being almost destitute of trees and under-brush, and therefore a large portion of it is in cultivation, and many houses and cottages are scattered about in different directions, and altogether form a pleasing and animated

scene. The ground is composed of a rich red loamy clay, and the whole road across the plains is as good as many of the English high roads, and this without having had a single penny expended upon it, except where a bridge has been thrown across the river, or a small cut made in one or two banks of creeks, to render the descent more gradual. The constant traffic over this road has made it hard and solid, and almost impervious to the wet, and whether in summer or winter very little difference can be found in it. The only expense of a railway to Adelaide along this slight rise would be the tram-road on the surface; and, as this is a level all the distance, no cutting or embankment would be required. At present it is as good as the Paddington road, upon which a steam carriage has often been at work, but has this advantage, that no hills are to be met with during the whole distance, and the plain is not broken into pits or small holes, as it frequently is in Australia in plains of this character.

After passing about six miles from the port, along this road, the greatest traffic is over a very neat and handsome bridge, named after the present Surveyor-General, Captain Frome, and which is made of timber with stone facings. The river Torrens, over which this bridge is thrown, divides Adelaide into two parts, North and South, and in the winter-time is often much flooded, and in one instance carried away a former bridge. It has never, however, been known to overflow its banks, which are in some places from 50 to 100 feet high. During the summer the water ceases to flow, but collects in large natural tanks or

holes, some of them of great extent, and supplied by underground springs; thus there is never any scarcity of water here. This river is well able, from its size, to supply more than twice the entire number of the colonists for all their uses, and also their numerous flocks and herds. It is not, as represented by some, a small, insignificant gully, containing a few holes of stagnant water; but neither is it, as other writers again have given their readers to understand, a large and constantly flowing river, much like the Thames, and navigable for ships of any size: when such readers see the place of the stream, and find that in the summer they can walk over it dry-shod, it causes them to let off their disappointment in strong language, and to decry the Torrens beyond the truth. This certainly lies between the two representations: but no person who has lived in the neighbourhood has, I believe, ever known any scarcity of water; nay, too many have lost their lives even during the summer-time in this insignificant puddle, as it has been called. In addition to its other advantages, the water is very pure and wholesome.

After passing the Frome Bridge, the road is fenced in on both sides, and runs through the park lands, also fenced, and which surround the city, and have been preserved for the recreation of the inhabitants. This park land is a pleasant scene, and has much the appearance of the English parks, being adorned in many places by large native trees growing in clumps, and having the river passing through the grounds for some distance, with handsome trees lining its banks. Altogether this appropriation of

land is excellent, and highly conducive to the health of the town and to the free circulation of air around it. The park trees are a favourite resort for numberless parrots, both large and small, which, during the day, keep up a constant chattering amongst the branches, and kindle the picture with their gay plumage, glancing and sparkling in the sun.

The banks of the river, only a few years since, were a favourite resort for emus, kangaroos, and other animals, before the white man scared them away; but now they are not seen in this locality, unless perhaps some stray specimen that is hunted by the dogs, and, past its wits, seeks shelter among the abodes of its destroyers.

After traversing the park land, the road is up a gentle rising hill, and then turns to the right along North Terrace, in front of the Government House. This is a commodious building, surrounded by ten acres of land, part of which is laid out in tastefully ornamented gardens, with walks and shrubberies; and in the front of the house a high signal mast is put up, on which the British flag is hoisted, to denote the presence of the representative of royalty. This house was built by Colonel Gawler, and is a convenient and comfortable dwelling. In front of the house, and separated from its grounds by only a large sunken ditch, is a pleasant promenade, neatly railed off from the road and gravelled. This promenade is deservedly a favourite resort with the town's people, who come out here after the heat of the day is over. On the other side of the road, and facing the Government House, is North Terrace, which boasts of many

neat villas, with handsome gardens and cool verandahs; in this terrace there are some substantial and ornamental stone and brick buildings, as the Australian Company's offices, the Bank of South Australia, and, farther on, Trinity Church, part of which has been lately built afresh, and the whole much improved in appearance; on the same side as the Government House is the Legislative Council House, and other substantial edifices. A turn to the left, past the Post Office (a small and mean-looking edifice, built in former days), takes the visitor up King William Street, lined on one side with comfortable houses and shops, and on the other with the stock yards and other buildings belonging to the auction mart, which is at the corner of King William and Hindley Streets, and is a handsome building that would be considered an ornament to any English town. Farther up King William Street are many large buildings, as Younghusband's, Montefiore's, and Stock's stores, and in the distance the Government offices and Commissariat stores, and besides these, many good private houses and shops of all descriptions. Hindley Street is the principal place of business, and here is to be observed all the bustle of a flourishing town, the way being filled with heavy drays loaded with produce, drawn by four, six, or eight bullocks, and accompanied by the drivers, shouting and cracking their long whips; also with waggons and carts, drawn by strong English-looking horses, and mingled with gigs, carriages, and horsemen, all seemingly eager in business or pleasure, and taking little notice of the half-naked

black men, armed with spears and waddy, accompanied by their *lubras* (or women) and children, and followed by gaunt, lean kangaroo dogs. Hindley Street is lined on both sides with good stone, brick, or wooden houses, some few of which are of superior build, and do credit to Australian street architecture. Many of the stores or merchants' warehouses are massive brick or stone buildings; and altogether the town has a much more imposing aspect than could be expected from the difficulties it has encountered and the short time it has been established. Most of the better kind of buildings have been but recently erected, and these are finished in such a style as to lead to the idea of no scarcity of cash at present. The principal public edifices are the two churches, Trinity and St. John's, and three or four very commodious chapels belonging to different sects; the Government House and offices before mentioned; the Court-house (once the theatre); the Bank of South Australia; the South Australian offices; not to mention others. There are two banks in Adelaide, one the South Australian, the other the Bank of Australasia. This last is a branch of the Australasian Bank, which has establishments in all these colonies. Its business has hitherto been carried on in a small but elegant cottage situated in North Terrace; but now, as I understand, the intention is to erect a more commodious and substantial building in the business part of the town. Besides the Frome, a large stone bridge is in the course of erection, and probably is by this time completed. This, by opening a new line of

way, will lessen the distance to the port, and be a saving of labour to the bullocks that are constantly at work on the road.

The land originally surveyed for the intended city amounted to 1000 acres, of which 700 acres are on the south side of the river Torrens, and 300 acres on the north. The streets are laid out at right angles to each other, and, being from one to two chains in width, are broad enough for all purposes. In the town six public squares have been laid out, and twenty-two principal streets, thus allowing plenty of room for increase at a future day, and making the present city healthy and pleasant.

Many of the houses have from a quarter to half an acre of free ground surrounding them, and which is laid out in gardens and shrubberies, containing many varieties of European and tropical fruit-trees, as well as others. The squares are large, and in the centre of one is a handsome monument erected in remembrance of Colonel Light, the founder of the town, who is always spoken of with the deepest respect by every colonist who had the happiness to be acquainted with him. His body is interred in the cemetery, but it will be long before his memory is forgotten. Great opposition was manifested to his plan of forming the town at the spot where it is now situated; but by his firmness he overcame it all, and now, when he is gone, every one is desirous of ascribing to him the entire merit of choosing the excellent site where Adelaide stands, and which is acknowledged to be the best. The buildings in the city of Adelaide, both north and south, are, according to the census

returns completed in March 1846, 1547 in number; of which 865 are built of stone or brick, 231 of wood, and 451 of other materials, but generally of pisé, or, in other words, *mud* built up in frames, hardened by the sun, and afterwards whitewashed. This last description of building was frequent some years since, when *Adelaide was in its glory*, as it was called, which means, when land-jobbing and trickery were the ruling order of the day; but, since the *glory* has been succeeded by wholesome trade and commerce, these perishable buildings have given place to substantial and comfortable houses, and the mud huts are going to ruin as fast as possible. In those palmy days, these edifices, with but two rooms generally in each, were let at 1*l.* 10*s.* per week; now better can be taken (without a repairing lease) at from 3*s.* to 5*s.* At present, even the poorest colonists want something better than those hovels, whence there are not many bidders for them at any price; and the consequence is, that the newly formed town of Adelaide is in some places a heap of ruins, which are fast returning to mother earth, and leaving only a pinch of dust to proclaim the worthlessness of this speculative glory. The tenants of these little cots, instead of looking for cheap building lots, and talking of founding cities, are now quietly engaged in cultivating the land, and providing for themselves a comfortable livelihood, and thereby are greatly advancing the welfare of their fellow-colonists. In passing through the country, the traveller may find sign-boards staring him in the face, with the name of some imaginary terrace or square, street or circus,

marked upon it in white letters; and, following the direction, he will find himself in the midst of an invisible and imaginary town, without buildings or inhabitants, cattle meanwhile rubbing themselves unceremoniously against the sign-posts, which is the only thing they are good for. These are *indications*, as the miners say, of what it was once thought the place would be,—a vast town like London perhaps, without any available country for farming productions, instead of a vast country upon the produce of which the whole town is dependent. Hence, instead of numberless town allotments of so many feet frontage, the colonists have now happily found tracks of land of almost boundless extent; and instead of town houses and luxuries, they are content to live in small huts or cottages, and to have their wealth in flocks of sheep, herds of cattle, or broad acres of arable land.

The amount of population in the city (north and south) is 7,413: of these, 66 are represented as land proprietors, merchants, bankers, and stockholders; 37, clerks or overseers to the above; 60, professional persons; 22, clerks and assistants to the above; 43, manufacturers, brewers, or millers; 29, clerks or assistants to the above; 284, shopkeepers and other retail dealers; 141, clerks and assistants to the above; 1500, mechanics, as brickmakers, bricklayers, smiths, carpenters or joiners, masons, shoemakers, cabinet-makers, plasterers, harness-makers, tailors, tanners, miners, sawyers, carriers, domestic servants, &c., &c. Of the occupation of the rest no return has been made, most of them being women and children.

The city of Adelaide is situated in the midst of a large fertile plain, at the distance of about six miles from the waters of the gulf in front, and about three miles from the foot of certain large hills at the back; the highest of these hills is Mount Lofty, which reaches to an altitude of 2334 feet above the level of the sea, and is covered, as also are many of the other surrounding ranges, with a dense forest of timber, useful for the wants of the people. To the right and left of the town is a continuation of the level land, backed by the ranges of hills, and extending about eight miles to the south, where the plain terminates, and the continuation of the hills forms a steep bluff coast. To the north the level runs much farther than the eye can reach, and continues for many hundred miles without meeting any extensive hills to break its surface. In consequence of the heat of the sun on these vast northern plains, which are but little sheltered by trees, they quickly become parched and dry, and the wind blowing over them is rendered suffocatingly hot, and loaded with particles of fine dust. When this dust begins to make its appearance, the only remedy is to seek shelter in the house, shut up every door and window, and put up with the closeness of the air in the house rather than be choked with the volumes of dust. No one, after being out in this dust long, requires any dinner; for the dirt he is obliged to swallow will satisfy his utmost craving for that day at least. One great blessing is, that the hot winds and dust never last long, but are succeeded by a strong south-west wind, which, gaining the mastery, very soon sets all right

again. The dust nuisance is only felt on the plains and in the town, the hilly parts being nearly free from it, and their inhabitants knowing little of the sultriness of the level country.

The province of South Australia is divided into the following counties:—Stanley, Light, Eyre, Gawler, Adelaide, Sturt, Hindmarsh, and Russell.

Adelaide is the only town of any extent in the colony; but many little villages have sprung up in different parts, some of them containing from one to two hundred inhabitants, and in buildings and general appearance much like those in England. Of this kind are Thebarton, Hindmarsh, Bowden, Islington, Walkerville, Klemzig, Kensington, and Goodwood, all of which are within a few miles of Adelaide. Another class are the country villages, or towns as they are called; as Gawler Town, Angaston, Mount Barker, Nairne, Balhannah, Macclesfield, Strathalbyn, Hhandorf, Noarlunja, and others of less note. These little places were originally laid out by some person who had purchased an eighty acre section or two, and who, getting it surveyed and cut up into acre or half-acre allotments, sold these at a high price. The original price would be 1*l.* per acre, but most of the *town-lands*, as they were called, directly they were surveyed and named, sold at from 10*l.* to 40*l.* an acre, or sometimes more, if situated in what was thought would be "the business part" of the town.

The following is a comparative return of manufactories in South Australia for the years 1843, 1844, and 1845:—

	1843.	1844.	1845.
Barilla manufactory . . .	1	1	1
Coach do. . . .	2	2	3
Machine do. . . .	3	4	5
Salt do. . . .	0	1	1
Snuff and Tobacco manufactory .	1	1	3
Soap and Candle do. . .	4	4	4
Starch do. . .	1	1	0
Breweries	9	9	18
Flour mills . . .	16	21	24
Foundries (Brass) . . .	1	1	2
——— (Iron) . . .	2	2	2
Pottery	1	1	1
Tanneries	6	7	8
Waterwork	0	1	1
Maltsters	0	0	10

The following advertisement, which appeared in the *Adelaide Observer*, 28th August, 1847, shows that one more manufactory may be added to the list: "*Wanted*—Carders, Slubbers, Spinners, Weavers, &c., &c. At the Woollen Manufactory, Union Mills, Currie Street. A good Spinner and Warper may be set to work at once."

Return of the number of flour mills, with their separate motive power:—

	1843.	1844.	1845.
Steam	5	8	11
Wind	7	7	8
Water	2	2	3
Cattle	2	4	2

Number of churches of different sects, and average number of the congregation of each, according to the census taken in March 1846:—

	Number.	Congregation.
Church of England . . .	5	840
——— Scotland . . .	2	140
Dissenting Chapels . . .	31	2,325
Society of Friends . . .	1	15
Roman Catholics . . .	2	470

Total number of births, deaths, and marriages in 1845:—

Births.	Deaths.	Marriages.
708	238	141

Number of Sunday and day schools for European and native scholars:—

Sunday schools,	26	European scholars,	1199	Native,	66
Day schools,	55	„ „	1470	„	66

The number of manufactories of different kinds shows a decided increase within the last three or four years; before that time scarcely any thing of the kind had been thought of, much less attempted; at present all kinds of articles of colonial manufacture are to be purchased in Adelaide cheaper than they can be obtained retail from England, when they have the expense of package, freight, cartage, and breakage added to them. The return of the number of flour mills would, one might imagine, clearly show that there was no difficulty in getting wheat ground; and as these mills are disseminated all over the settled parts of the colony, it is easier to take a load of wheat and get it ground off-hand, than to use hand mills. These are about the most useless articles brought out; but, for all that, every emigrant with capital, and intending to farm, supplies himself with

one of them: it would be much better to pay down half the money the article costs, to be allowed to leave it in the shops. Some profess to grind and separate the flour into "firsts" and "seconds," and detach the bran and pollard, which the mills certainly do while in thorough repair; but the voyage is usually enough for them, or if this do not settle them, a day's grinding quite suffices to use them up.

It is curious to notice the great difference in the number of public-houses licensed in the town and other parts of the colony. At one time there were more public-houses than private dwellings of the same size, and yet, strange to say, *all* found a profit from their goods, and some few of the publicans *retired* on their gains. Now, however, they have diminished in number very considerably, although the population has in the same time more than doubled itself. This is the best argument that can be used to show the improved condition of morals in Australia. A very few years since, the vice of drunkenness was common, even amongst the higher classes, and it was so frequent amongst the lower that little notice was taken of it. Morning, noon, and night, the public-houses were full; and amidst the jingling of the glasses might be heard the adventurous speculator holding forth on the capabilities of his horses and cattle, or showing the favourable position of some town lot that he was willing to sell to a friend. But now this is all over, and, if any buying or selling requires to be done, there are proper places of business for the purpose; and although there are fewer public-houses, those that remain do not get half the custom,

or obtain half the amount of cash, that the same number did five years before.

Return of the number of licensed public-houses from 1841 to 1845:—

	1841.	1842.	1843.	1844.	1845.
Adelaide	58	38	32	34	41
Port Adelaide	9	6	2	3	4
Country, including Port Lincoln	38	37	33	33	40
	105	81	67	70	85

While speaking upon this subject, it will be interesting to notice the number of offenders convicted in the Supreme Court of South Australia, in the years ending 30th September, 1844 and 1845:

FELONIES.	1844.	1845.
Offences against the person	2	3
Offences against property	15	10
Miscellaneous, as forgery, uttering forged notes and orders, or making and counterfeiting coin	„	8
Total of Felonies	17	21
MISDEMEANORS	4	1
Total of Convictions	21	22

It must be remembered that the number of the population is above 25,000, many of whom have arrived in Adelaide from the neighbouring penal settlements, and these are the parties who generally make the amount of convictions as high as it even now is.

Otherwise, I consider that there are few places having the same character for morality as South Australia, and no place where the immoral man or the drunkard is more shunned by all the respectable part of the community.

In the Government Gazette, published on the 4th February, 1846, are given the returns of receipts and expenditure for the quarter ending 31st December, 1846.

	1845.			1846.		
Customs:—	£	s.	d.	£	s.	d.
Spirits imported	2,697	9	9	4,377	0	5
Wines	346	10	4	571	13	0
Tobacco	1,310	19	11	1,601	12	5
Other goods	3,073	12	8	6,328	12	1
Other receipts	255	3	1	129	9	6
Postage of Letters	248	0	2	345	14	9
Fines	154	5	0	53	7	4
Fees	551	1	5	640	4	0
Auction duty	115	9	5	205	18	5
Licences	76	0	0	149	0	0
Assessments	1,923	13	7	1,004	14	4
Other items, less drawback	854	7	5	141	15	7
	£11,606	12	9	15,549	1	10

The increase of revenue is no less than 40*l.* per cent., being above 8 per cent. more than the increase in 1845 over the previous year.

"The revenue received in the year 1846 amounts to 48,017*l.* 10*s.* 2*d.*, or 21,391*l.* 19*s.* 8*d.* more than the estimated expenditure. Some months since, Lieut.-Governor Robe applied to the council, and obtained

its sanction to additional expenses in 1846, chiefly for public works and improvements, to the amount of 28,187*l.* 1*s.* 9*d.*, on the understanding that any deficiency in the revenue received should be supplied from the half of the land fund applicable for such purposes. We are sure that it will surprise every one, but more especially Governor Grey, who framed the estimates for 1846, to find a surplus of 21,391*l.* 19*s.* 8*d.*; and it must astonish him to find that only 4,795*l.* 2*s.* 1*d.* of the very large sum voted for public works will be required to be drawn from the land fund. This is the more gratifying, as it leaves the money for emigration; but we do not think that even the last-mentioned sum will be required for the revenue. The revenue in 1846 was 48,017*l.*; the estimated expenditure for 1847 is 42,760*l.*: thus if the revenue of 1847 is no more than that of 1846, there will be a surplus of more than 5,000*l.* But it is nearly certain that the ratio of increase will at least equal that of the preceding year.

"The revenue in 1845 was . .	£36,182 9 10
1846 . . .	48,017 10 2
	£11,835 0 4

"At this rate we may confidently expect that in the year 1847 the revenue will exceed 60,000*l.*, and will afford a surplus, after expending the large sum of 20,000*l.* in public works."—*Extract from the Adelaide Observer, 30th January*, 1847.

CHAPTER IV.

ADVICE TO FARMERS.—LIVING IN TOWN.—HUT BUILDING.—CLEARING LAND.—STEEPING WHEAT.—FENCING.—REAPING MACHINE.—AVERAGE CROP—BARLEY, OATS, MAIZE, POTATOES.—EXPENSES OF FARMING.—BUILDING.—PURCHASING LAND.—EXPENSE OF FARMING EIGHTY ACRES.—FARMING IMPLEMENTS.—PRICES OF FARM PRODUCE.—TOBACCO CULTURE.—AGRICULTURAL SOCIETY.

After the emigrant has been so many months on the sea without sight of land, or has only seen it at a considerable distance, and has been cooped up in the small space allowed him on board, he feels the greatest pleasure at the prospect of once more setting his foot on *terra firma*, and revels in the anticipation of acquiring, cultivating, and improving a property of his own. This is his constant thought on board; and the chief anxiety he experiences is to divine the kind of life he will lead, and to imagine the particulars of the country in which he will probably end his days.

On his first arrival he feels surprised at the massive buildings at the port, and at the number of vessels lying there from different parts of the world; and this particularly strikes him, when he remembers that the colony has only been established a few years, was

but a short time since in deep want and distress, and has but lately begun to make any headway.

The improvement effected in the mercantile state of Adelaide is nearly all due to the farmers, and to this class the colony is indebted mainly for its sudden rise and prosperity.

An account of the capabilities of South Australia would include information suitable to no other class than agriculturists and miners, and therefore any work written expressly for that part would be but an account of farming and mineral pursuits. South Australia indeed has risen of late in the estimation of the whole world, by the immense quantity and richness of its ores, but which were only discovered after the colony was able to support itself by the produce of its soil: and therefore the general richness of the soil was the primary cause that made it flourish.

The farmer, directly he lands, should endeavour to procure a farm, or plot of land, with the least possible delay, which he will find little difficulty in doing, for there is an abundance of splendid land yet unoccupied, and sufficient farming for many thousands of proprietors.

We may observe *en passant*, which we shall have occasion to repeat, that the emigrant farmer ought not to stay in the town on his first arrival, as his great object is to obtain all the information he can, which may be best gained by travelling about to different parts of the colony, and observing the various modes of operation in actual practice. Great difference will be perceived at the first glance between the colony and the mother-country; and this, both in the

large quantity of available land, and in the primitive way of farming there in use. If the emigrant has a wife and children, they may be left in town until he has determined upon the spot he intends purchasing, and when he has built his house they may then follow him; this I should recommend as being the most pleasant course for the family. With many, however, a house to live in is a secondary consideration, on account of the healthiness and geniality of the air and climate, which enables persons to do things there which would soon consign them to a bed of sickness in England. Thus it is common to sleep for nights together in the open air without any injury to health; and, on first entering on the country life, a tent or suchlike slight covering is considered amply sufficient for all wants, until the emigrant has ploughed, sown and fenced his land; when, if time be allowed, the building of a house is commenced. This edifice generally differs from any building to be seen in England, and would be a curiosity if transported hither. The colonial country houses are of various materials, as turf, pisé, slab, brick and stone; and, even among the same class of persons, are roomy, neat and comfortable with some, small and miserable to the last degree with others; which, however, is easily accounted for by the fact, that the farmers (with few exceptions) build their own cottages, and it is not every man who is an architect, or can make the best of his materials. A very common, and, if justice be done to it, a very comfortable way of knocking up a mansion is that called *wattle and dab*, which consists of making a frame with strong

uprights of wood placed in the ground about two feet apart, and then weaving in long narrow sticks, much in the same way as is done to make strong wicker baskets, spaces being left for doors, windows, &c.

When the basket-work of the house is completed, a quantity of hay or straw is chopped small, and mixed with well-worked clay or earth, and is then thrown on to the wicker-work, or *wattling* as it is called, so as to fill up all the fissures ; after this, it is smoothed off with a trowel, and whitewashed inside and out. When due care is taken in their construction, such houses, though poor, may be made very comfortable, and answer well enough for the first two or three years.

Slab huts are built of wood split into broad pieces like boards, and about two inches thick; a frame is made, and the slabs are nailed to a wall plate at the top, and either let into the ground, or fastened to a sleeper laid on the surface; such houses are quickly made, cheap and comfortable. The covering is either thatch, paling, or shingles; even slates are sometimes used, but these last are liable to the objection of being too hot. If properly worked at, the farmer, with the assistance of his man, or his couple of labourers, is able to sleep in his own house in a week or ten days after its commencement. The hut once finished, and the stores and goods under shelter, the next job is to clear the land ready for the plough. If the section be timbered, the farmer digs around the roots of the trees, laying them bare, and then cuts them through with an axe or saw, till the tree falls, when it is got rid of either by burning, or by drag-

ging it away to the adjacent land, to be burned at some future time. This mode of clearing is called *grubbing*, and destroys the whole tree. Very large trees are sometimes killed by cutting the bark circularly, and making a further ring to the depth of about two inches in the substance of the tree itself. This is called *girdling*, but is a slovenly plan, and cannot be recommended to the beginner: cutting down the tree, and leaving the stump in the ground, is better; but the bare stump looks unsightly, takes up room, and is often years before it dies. Unless very excellent land be found, or great collateral advantages obtained, I should advise the farmer not to purchase heavily wooded land for agricultural purposes, since the expense of clearing is great, and causes much labour at a time when all available resources are required for other things. In most parts of the colony there is a great choice of land; you can either get it densely covered with trees, moderately wooded like the parks in England, or with not a tree upon the whole farm. The reverse of America, the largest trees grow on the poorest soils, and therefore they are no positive proof of the goodness of the land in Australia. The lands with the gum, oak, or other trees in small clumps, are generally very good, but seldom superior to that land which is bare of all trees and shrubs. In some parts, as at Yankalilla, this land is superior, and yields most abundant crops. It requires six bullocks to turn up new land; these get through about one acre a day, or at least five acres a week, without being distressed. The ploughing should be finished by the latter end of March, or the

middle of June, at the latest; wheat is not found to grow well if sown after that time. Bullocks are most used for ploughing in Australia; they are not inconvenienced by the heat, do their work steadily, are very enduring, and, when the day is done, are turned out in the bush to get their fill of grass. They, however, require two men to each team, one to drive, the other to guide the plough, and in this respect are not so economical as horses.

The quantity of wheat sown to the acre differs very much on different farms, some farmers using only one bushel per acre, and others as much as two. The mean is found to answer very well, and is the most usual quantity. Great care is necessary in selecting seed, which should be free from smut, drake, or wild oats, and before sowing should invariably be steeped, to obviate the risk of a smutty crop. This is done as follows: on the evening previous to sowing, wash the seed wheat in clean cold water, skimming off every thing that floats; then immerse it in brine sufficiently strong to swim an egg, adding a solution of bluestone in the proportion of two pounds to the first three bushels of wheat, and half a pound additional to every three bushels steeped in succession in the same liquor, taking care to keep up the strength of the brine; pour the wheat into the liquor very gently, stir it well about, and skim off every thing that floats. In the morning draw off the liquor, put the wheat into a basket, box, or tub with small holes in the bottom, to allow the remaining liquor to drain back into the tub; then lay the wheat on a floor, and sift some fresh lime over it, stirring it well up, to mix the

lime with the seed; one shovelful of lime is sufficient for a bushel. The grain is now fit for sowing, and should not be allowed to remain in a heap too long, or it will be heated and spoiled. What is steeped over night should be sown next day.

The land after sowing will require well harrowing, and rolling improves it; but this is all that is required until the blades of wheat are six inches high, by which time the fencing should be finished. I have known many who did not fence their land at the proper time and lost their whole crop by the omission. A herd of cattle soon makes a difference in its appearance, being very fond of young wheat; and, when once they have tasted it, they always have a hanker after more, and strong fences are required to keep them out. The land should invariably be well fenced at the onset, by which much trouble will be saved as well as great expense. The most usual and the best fence is the post and rail, which is common in England, and is made by three or four rails being fitted into each panel between the posts which support the ends of the rails. This fence is made of stringy bark, with the rails nine feet long; and the posts six feet six inches, of which length from fifteen to eighteen inches should be firmly fixed in the ground. A good fence of this description costs 2*s.* 6*d.* per rod, splitting and putting up, and lasts about ten years, after which time it may be used for firewood. Another kind is the upright or kangaroo fence, made by cutting all the timbers about six feet six inches in length, placing them close together in a trench about eighteen inches deep, and then

having the loose earth firmly beaten in about the butts, and a rail or band of hoop-iron or wood nailed along the top. When well made, this fence costs from 2*s.* to 2*s.* 6*d.* per rod, and is substantial and excellent. Another mode is that called the *dog-leg fence* or *chevaux-de-frise*. This is a strong and durable fence, but requires a great quantity of timber to make it properly, and is not easily repaired; moreover is dangerous where fires are common, as in places where the grass is not well "fed down" by cattle or sheep.

These are all good fences; but it is a matter of surprise to me that the farmers are satisfied with wooden fences, which must in a few years decay and require renewal and repair. The plan in England is to train a hedge inside, which by the time the fence falls, is strong enough to supply its place. There are several native shrubs that would make excellent hedges; among which we may mention the thorny acacias of Kangaroo Island. The sweet-briar might be used, and, with a few brambles intertwined, would answer most purposes. The castor oil and larkspur, although not fit to keep cattle out, might be ingredients in the hedges, and would do much towards protecting a section from the locusts: the native myrtles might also be employed when a very thick hedge was required. Fences made of timber are always expensive and want repair, and a little additional expense at first starting, in ploughing a few furrows round the inside of the fence, and sowing the seeds of some kind of shrubs, as the furze, acacia, prickly pear, or any thing to make a solid and last-

ing hedge, would be a great saving in the end. The grand objection to the hedges has been their liability to catch fire during the summer; this, in consequence of the heat of the climate, is certainly a serious drawback when the country is scantily stocked with cattle or sheep, and the grass or underbrush is on that account high and rank. The land, however, about the town is never in this state, and therefore the chance is small of the fire extending over the country by igniting the grass, and hence this need be no objection to making hedges in those parts. Before the harvest comes on, a large barn should be built, either of stone, brick, or wood; and as all labouring men in the colony are handy with tools, this may be finished by the farmer and his servants without employing extra labourers: by the by, if the farmer is not a bit of a carpenter, the sooner he learns the art the better, as it will be most useful to him, and save much expense.

On the plains the wheat harvest commences in November, but in the hilly districts not until December or the beginning of January, according as the season is wet and cold, or fine and warm. Reaping by hand costs from 12*s.* to 15*s.* per acre; but if the crop be cut by the reaping machine, invented by a gentleman in Adelaide, the cost is only about 8*s.* for the same quantity. This useful invention reaps and thrashes the corn, and winnows it ready for the market, and is a saving to the farmer where the cost of hand reaping is so great.

The following description of the above machine is taken from the Report of the Royal Agricultural So-

ciety of England, to which an account of the invention was sent by Captain Grey, the Governor of South Australia.

Description of the Machine.

"The colony continues to prosper; and the only event which has created any sensation is the complete success which has attended the operations of a new reaping machine, invented in the colony. This machine reaps, thrashes and winnows, all at the same time, and this at the rate of nearly an acre an hour; the machine requiring to be attended by two men.

"It is something like a cart, pushed forward by two horses, instead of being drawn. In front of this machine is a very large steel comb, which is pushed forward, and seizes the straw of the wheat, as an ordinary comb seizes hair. As the machine is moved forward, the straw is, by the motion, drawn through the comb, until the head, or the part containing the grain, is caught in the comb, and dragged upwards towards the mouth of the machine. From the peculiar dryness of this climate, the wheat (what is termed) sheds very easily; that is, the corn, or grain, falls very readily out of the husk; indeed, so much so, that wheat cannot be reaped here in the usual manner, without considerable loss from the shedding.

"As soon, therefore, as the head of the wheat is caught in the comb, the grain is, as it were, combed out, and falls down the comb to the mouth of the machine; that part of the head of the wheat which does not get through (which is too fine to admit it

until the grain has fallen out) is ultimately dragged up to the mouth of the machine, when it is knocked off by an apparatus like that of the ordinary thrashing machine; and the wheat is then thrashed in the same manner as in other thrashing machines, whilst the rapid advance of the machine creates a strong draught, by the aid of which the corn is winnowed. The straw is left standing; so much of it as is required for manure, &c., is mown, and the remainder is burnt."

Mr. Ridley, the inventor of this machine, has since made some improvements in it; and it is now drawn by bullocks, instead of being pushed forward by horses. About twenty of these machines were in full work on the plains of Adelaide in December last; and the cost of reaping, thrashing and winnowing by them is about 10*s*. per acre.

Her Majesty the Queen and Prince Albert have been pleased to express to Mr. Ridley their high admiration of the value and importance of this invention.

From 25 to 30 bushels are about a fair crop of wheat on the average quality of land, but from 40 to 45 have been gathered in where the land has been superior, or, what is almost as good, where proper attention has been paid to its cultivation throughout the whole process. The weight of Australian wheat is greater than the average weight in England; but the grain is, if any thing, dryer, so that that cannot account for the difference. Some wheat that obtained the prize at the Agricultural Show in Adelaide in the year 1844, weighed 66 pounds 4 ounces to the

bushel; in 1845, 67 pounds 6 ounces; and at the last show the prize wheat weighed 66¾ pounds. This is much heavier than in England, where wheat seldom weighs more than 64 pounds.

In New South Wales and Van Diemen's Land the crops have several times been ruined by long-continued droughts; but during those years the South Australian produce did not suffer from that cause; which is accounted for by the prevalence of south-westerly winds, which are always accompanied by more or less rain. The greatest enemies the farmer has to contend with are the blight and smut in the wheat. The blight is occasioned by the hot winds scorching the wheat when in flower. These hot winds are seldom much felt except in the plains, and even there not generally until the wheat is enough advanced to resist their blighting effects. The smut is occasioned by not properly steeping the wheat in some preparation before sowing, or by allowing a self-sown crop to come up, in which case it is almost sure to be infected, and moreover to abound in drake and other injurious weeds. Many persons, by not getting their crops in at the proper time, suffer the grain to fall on the ground, and there being no winter to destroy the seed thus deposited, if it be left, a crop will spring up the next year; some have taken advantage of this circumstance to avoid the trouble of ploughing, and have certainly obtained a return, but very much less than by going the proper way about it. Caterpillars do some damage to the wheat and other crops, but only partially, and little notice is taken of them.

In consequence of the natural richness of the soil and the luxuriance with which produce grows, and also in consequence of the colonial modes of culture in vogue, and which answer well, the English farmer will find that his practical knowledge is of little value to him unless he correct it by observation on the spot. No dressing is used at present, but in time the land will doubtless require it; however, I have known land cropped for four or five years successively, and no dressing used, and the crops still excellent. If wanted, dressing can easily be procured in almost any part of the country; for straw is frequently burned to get rid of it about the farm; and the manure from the large stockyards is often served in the same way. In addition to this, sheep may be folded over the land, and there is a good dressing to be obtained from the large quantities of kelp and sea-weed along the coast; lime also is abundant in all parts of the country.

In addition to wheat, the chief crops are barley, oats, Indian corn or maize, and potatoes. Barley is sown in August, and grows very well, yielding a large crop, at an average weight of 56 pounds to the bushel. The English barley is used for malting, for which purpose a great quantity is annually sold, there being *ten* malting establishments in different parts of the country. Cape barley is not much in demand, being only used for feeding pigs, fowls, &c., but when cut green, and made into hay, it is found to answer well for horses and cattle. Oaten hay is often made, and fetches from 2*l.* 10*s.* to 3*l.* per ton in the town; but, as the cartage from a distance is expensive, it will only answer to grow the oats near town for that pur-

pose. Maize or Indian corn yields a fine crop, averaging on good soil from fifty to sixty bushels per acre; it is sown in September or October, and ripens about March. Maize is not extensively planted, being used only for feeding pigs and poultry, though sometimes a little is mixed with oats for horses. Although this grain produces more than wheat, it also gives more trouble, as it requires planting in holes six feet apart, and also earthing up when half grown; which involves considerable labour and expense. Potatoes are planted in January, and again in August; and both the summer and winter crops are generally abundant. As far as my experience goes, the Australian potatoes are free from the dreadful disease that has ravaged Great Britain and many parts of Europe; although I see, by late papers from South Australia, that it is imagined that the colonial potato has been at length attacked. The description they give of the malady, however, makes it different from that here observed; for the only complaint is, that the potatoes in some parts are watery, and in others hollow in the middle. The potato crop is often from nine to ten tons to the acre, and I have been told by a person who grew a large quantity, that many of his roots yielded from thirteen to fourteen pounds each, and the tubers themselves were from three to four pounds weight, without being either hollow in the middle, or otherwise unfit for the table. Some South Australian potatoes were a few months since shown at a meeting of the Royal Agricultural Society, and were pronounced remarkably fine. These were sent, I understood, by Lady Franklin.

The expenses of farming are small, and if a reasonable crop be obtained, and a fair price, there is little fear of the result; especially where the land is the farmer's own property, which is a very important item in success. I advise all persons commencing farming to purchase the land in preference to renting it. The prime cost is only about 1*l.* per acre, and the rent for one year will be at least 2*s.* 6*d.* for good land for the same quantity, which rent must be paid whether the crops are remunerating or not. The fencing is expensive, and must be done whether the land be rented or purchased; so also a house or cottage must be built, with a barn, stockyard, pigsties and other buildings; and in addition to all this expense, if no ready money be in hand, part of the crop must be sold, perhaps at a sacrifice, in order to pay the rent when due. Therefore if the means will at all permit, it is most advisable to make the necessary outlay upon one's own land, and then the profit will be for the farmer's exclusive benefit, and the land his own as long as it suits him to dwell upon it, instead of the landlord reaping the benefit of the tenant's industry. This applies especially to a country like Australia, where the tenant farmer enters upon a plain piece of land, and has to make every improvement at his own cost, for the landlords do not first fence and build, and then let the land; this would never pay them; and I am sure that it would not answer a tenant's purpose to do so even if no rent were expected, as he might be ejected when the works were complete.

The owner of one or two sections will find means of passing his time both pleasantly and profitably,

and, by improving his land, will soon make a comfortable and prosperous home. When he finds that the crops succeed well; and a sufficient quantity of land is fenced and in good working order, when in fact he sees that he can manage to make a decent living, the next care will be to furnish himself with a neat and substantial house suited to his wants and to the climate. On some part of his land he will probably have stone fit for building, which can be carted from time to time, as a spare day intervenes, and unloaded near the spot chosen for his future house. In nearly all parts of the colony good building stone is readily procured; but where this is not the case, as in some of the large plains, clay for bricks is generally found. When enough stone or bricks have been obtained, a couple of sawyers must be hired to cut down timber, dig a saw-pit, and then cut the wood into the sizes and lengths for rafters, beams, door-plates, or whatever else is wanted for the building. While these men are at work the farmer's own labourers will have made a lime-kiln, and burned a sufficient quantity of lime, which also is easily procured, as much as is wanted, in all parts of the colony. After this a mason or bricklayer commences building; and a substantial and at the same time a cheap house is thus obtained. The doors, window-frames and flooring, should be of deal or cedar made on the station by a carpenter on weekly wages. A house of this kind containing dining, sitting, bed, and store-rooms, also kitchen and lumber-room, in all about eight good-sized rooms, may be built and decently furnished for about 200*l*. A large barn may be built of stone or brick for about

60*l.*, and all other buildings in the same proportion. It is needless to say that these expenses should not be incurred before the settler knows that he can well afford it, and that there is a prospect of earning a good living from his land. A well-fenced and properly cultivated garden of about an acre will be a great comfort to him. This, at the onset, should be trenched to at least eighteen inches in depth; which, as it is rather tedious work, may be done by contract, but after being once trenched no more expense should be incurred upon the garden, except in the purchase of fruit trees. All the rest of the work, as digging, sowing, planting, pruning, should be done by the farm-servants during wet weather, or on broken days, when there is not time to commence any other job of work, or if the farmer take an interest in it, he will find in it the means of passing away an hour or two after his severe work is over.

On an acre of ground sufficient vegetables of all kinds may be grown to supply the house during the year round, and, in addition, plenty of melons can be obtained for the hot season. Vines and fruit trees will be an ornament to the garden, and in the proper months the fruit will be found a great luxury, with no other expense than the purchase of the plants. In Australia it is in every one's power to sit under his own vine and fig tree, and in no country will they grow to greater perfection, or with less care, than in this colony.

To make the farm complete a few fowls and pigs are required; these are plentiful, and thrive well in all parts; the former increase so rapidly that there

is often a difficulty in keeping them under. The best food they can have is the refuse of the wheat and other grains. Pigs, if of a good breed, pay well for home consumption; their keep need be but little in point of expense, as it may consist of garden produce and skimmed milk; this, with a little wheat, will maintain them in good condition; and the comfort of seeing some hams and fine sides of bacon ranged around the store-room is ample compensation for the trouble incurred. A few cows will find their food on the unoccupied land around the farm, and supply milk and butter for the trouble of milking. Every farm should be provided with cows, if only to give milk enough for mixing with tea or coffee; it is, however, a curious fact, that in Australia many cattle owners having large herds, and amongst the herds many good cows, never care about milk for their tea, and do not consider the profit of milking equal to the trouble. Such people buy their butter either from the town, or at a neighbouring dairy.

When first coming on the land, the farmer must expect a bustling, busy time for some months, and must be most strenuous in his exertions, and do all in his power to work himself, or to superintend the tasks of his labourers. Most persons on their arrival are considered "green," and tricks are sometimes played them which are a little unpleasant. Some time since the following was common:—When a new arrival came, he obtained a lot of servants without character, (for where labour is so scarce they can find employment without any written character,) who took his dray and property out into the country to the land he had purchased.

If the distance they had to travel were considerable, knowing who they had to deal with, and feeling perhaps lazy or tired, his servants, quite by accident apparently, managed to lose the bullocks or horses at night, or during baiting, or to miss the road, and then the whole cavalcade was at a stand-still. The unfortunate master wished of course to find his missing beasts with as little delay as possible, and inquired the most likely direction that they had taken; this was always wrongly given, and off he started on his horse to find the poor creatures, which were snug enough in some gully or concealed corner out of his reach; then coming back quite tired to the point he started from, and weary of a settler's life, he made up his mind (at the suggestion of one or two of his men) to offer a reward for the cattle. This soon had the magnetic effect of drawing them home in double quick time; for, behold! the next morning they are brought in by one of the men belonging to the party, who covered with dust and streaming with perspiration, and moreover "tired to death," reports that he found them many miles off; that he came upon their track; walked till it was quite dark, then lay down "without a fire, or a bite or sup" until daylight, when he followed up the trail, and came upon the beasts about a dozen miles off the camp. Poor fellow! if you are a charitable man, you offer him a glass of grog and the reward, which he is thankful for, and sleeps the remainder of the day on the top of the dray to recover his night's exertion, which, however, was undergone between the blankets until about eight in the morning! However, all goes on comfortably; you

consider that it is a mercy that the cattle were ever recovered, and the man is quite pleased with his part of the reward; all the men, in fact, look happy, and have a quiet smile in their faces, and also one in their sleeves.

Many of the new comers are staggered at the mode of living in the bush, and make dreadful complaints of every thing; declaring that such a life is not fit for dogs, and that it is a savage, listless and miserable mode of existence; and they express their wonder that any one can do without good houses, chairs, tables, sofas, and the like; and, in fine, they give one the idea that they will never settle as farmers or graziers. However, after a few months have passed, the same persons pay you a visit, not as heretofore with dress coat and cloak, dandy boots and beaver hat, but more likely with a shooting coat on, or perhaps a blue or red serge shirt, and moleskin or corduroy trousers, a straw hat with a broad brim, and, ten to one, a short pipe, either stuck in the band of the hat, or in a pouch by the side. You will say that the former figure of the man was the better; this would be true in England, were he obliged to conform to certain rules of gentility; but in his new life he has to work for himself, or to see that others work for him; and if he desires to succeed he must be ready at all times to lend a helping hand, which, if he did in his superfines, he would soon have none left to appear in at the Government balls, and other such-like festive meetings. In England it is the greatest luxury to have well-made, good and warm clothing; but in Australia you want cool and loose garments,

except during the short season of cold weather, when warm cloth clothes are preferred.

I hope that by this time I have given some idea of the free life and multifarious occupations of the farmer, and that I have succeeded in showing the facilities which South Australia possesses over most other parts of the world, for buying land, producing grain, and rearing provisions sufficient for the wants of the inhabitants. I do not wish to make it appear that this is really the finest part of the earth; which on my part would be presumption (though, by the way, I have seen a goodly portion of the climates of the globe); but this I report, that all those who have been to other parts, and with whom I have conversed, and compared the several advantages and discomforts, one against the other, have come to the conclusion that South Australia is the pleasantest land that they have visited; which also is what I say myself.

Land is frequently to be bought cheap at the auctions, which, therefore, the new comer should attend if he be in town at the time. Before the land is put up, he must learn all he can about it, and if it be represented as good, let him go out and see it, ascertain why it is sold, see what buildings or improvements there are upon it, and, above all, whether there is a good supply of surface water, or else a well. By doing this he may perchance obtain a good section, with fencing and building, at a great bargain; but he must be very cautious, and only depend upon his own judgment. The reason of such sales is various; either the owners have been *unlucky* or extravagant, or else they may be going to some other part where

they will not be so closely environed by neighbours, and therefore where their cattle will find better food.

Land may be obtained of all known varieties of soil, from the light sandy to the heavy loamy and clay soils. The country also frequently abounds in different varieties of limestone, and in various earths and natural products useful to farmers and others, either for building, as clay, stone, or slate; or for making farming implements, for which the growth of native woods is well adapted, and more enduring than the species imported from other countries.

The following is, I believe, a correct calculation of the sum required to purchase and cultivate 80 acres of land in South Australia. I make two different prices, one high, and the other as low as the colony generally at present affords.

	High price. £	s.		Low price. £	s.
Eighty acres of good clear land	100	0	„	80	0
Fencing the whole, employing all labour	40	0	„	20	0*
Six bullocks, at 5*l.* each	30	0	„	30	0
One dray, plough and harrow	18	0	„	18	0
Carpenters' and farming tools	10	0	„	10	0
Building a cottage	30	0	„	5	0
Seed wheat, at 6*s.* per bushel	36	0	„	36	0
Twelve months' provisions for two persons	30	0	„	20	0
Two labourers, at 25*l.* each per annum	50	0	„	50	0
Provisions for labourers	20	0	„	20	0
Extra expenses, including reaping	60	0	„	20	0
Four cows for milk	20	0	„	10	0†
Ploughing the whole quantity, by contract	50	0	„	10	0‡
	£494	0		£329	0

* Working himself. † Two cows.

‡ Employing his own team.

The return from 80 acres of wheat, at only 20 bushels to the acre, and at 4*s.* per bushel, realizes 320*l.*

This calculation will be found correct, or, if any thing, exaggerated, as to the price of the different articles to be purchased. Hence it is evident that the profit will be large compared to profits accruing from the same sum expended in England; and that the first year the produce will pay for all the land, farm buildings, and cattle, and also for labour within 174*l.* *; and the second year the farmer will be entirely cleared of all his first expenses, and have cattle, land and plenty of wheat, besides barns and outhouses, which will be erected by his own men at no extra cost. Almost all farmers, of whatever class, build their own houses, which are generally made of rough slabs, and thatched or shingled as before mentioned: it will, however, be seen that I have allowed the sum of 30*l.* for this purpose: hence, if the farmer be content to live in a house built by himself or his regular labourers, he may save at least 25*l.* out of that sum. The poorer man may save also as much as 20*l.* from the allowance of 40*l.* for his and his wife's provisions. All the articles in the first list I have reckoned at high prices; thus the 80 acres of land are generally sold at 80*l.* 1*s.*, instead of at 100*l.* The fencing the land may be done by the farmer's men, and save another 20*l.*, and the money allowed for extras may be reckoned at 20*l.* instead of 60*l.*; but in all these cases, for at least the first year, the farmer must himself work, be the first up in the morning, and the last

* The sum of 174*l.* applies to the highest calculation.

to bed at night, which he may do without any damage to his constitution, and at much saving to his pocket. In order to plough the greatest part of his own land, he must not be later than January in commencing, when he will be able to get through a quantity of work before the sowing season comes on.

No person ought to set up as a farmer unless he be possessed of 500*l.*; that sum is the lowest he should commence with, unless he have grown up sons both able to work, and willing to save him the expense of labourers. This, indeed, will greatly reduce his expenses; but even then the sum I have indicated may be required in case of a bad season the first year. For this reason I place the above as the smallest sum that any one should begin with; but with this and with proper management the agriculturist may obtain a comfortable living, and accumulate moderate wealth.

In England about 1,000*l.* is required to undertake the farming of 100 acres, and even with this outlay the profit is little to the profit of half that investment in Australia, and the labour and anxiety are tenfold.

All kinds of farming implements are made in Adelaide, and those there manufactured are found to answer better, and to stand the heat of the climate more conveniently, than articles brought from England, the wood of which mostly warps and cracks, and even the iron is too often "made up for the colonies," and of little value; nay, numbers of the articles are of cast iron, which, when once broken (which is easily done) are not soon repaired. This applies to ploughs and harrows made all of iron, and which, when driven against a stone or large sunken root, snap short off,

and leave you in the middle of your work, when perhaps you have not a moment to spare. I recollect a farmer bringing one of these from Liverpool, and paying freight and cartage; then carrying it down to his farm about 50 miles from town; getting the ground ready, yoking the oxen, and putting this only plough within ten miles, into the earth. Before it had gone 20 yards, the cast iron beam broke, and there was an end of it. The original proprietor might have had it back for half-a-crown. In a case of this kind you are perfectly "in a fix;" the season is advancing; your grand stay and dependence is gone; no blacksmith can mend it; and it takes a week, and great expense, in short, a special journey to town, to purchase another, which, however, will be colonial made, and worth the money that it costs.

All kinds of carts, waggons and drays should also be purchased from those made in the colony, and in the end they will be cheaper and better than those imported. In some parts the roads are rough and stony, and the drays carry very heavy loads, and are constantly jolting about from side to side, often nearly, and sometimes quite, turned over, and all that kind of thing; of course, therefore, they require to be very strong, of a peculiar make, and innocent of the filagree work that is put upon such articles in England, and not forgotten in the bill. This will exemplify the kind of goods required for the emigrant, and the folly of taking light and fragile carriages for Australian work. Close to the town light waggons may indeed be useful, but even there they will not answer for journeys into the woods or tiers (timber forests), undertaken to procure fencing or building timber,

which is always required; in which case the farmer will have to keep two vehicles instead of one, which might do all his work and answer every purpose. As regards the wheels for these carriages, patent ones, all of iron, answer extremely well on hard ground, but when the land is soft they are not so good as the common sort made in the colony from native wood, and which are only about 6*l.* a pair, made to order, and warranted to last a certain time without wanting repairs.

The following is a statement of the prices of farm produce on the 1st of January, 1847:—

	£	*s.*	*d.*
Wheat, per bushel . . . . . 3*s.* 6*d.* to	0	3	9
Fine flour, per ton	12	0	0
Pollard, per ton 6*l.* 10*s.*, or per bushel of 20 lbs. .	0	1	4
Bran, per bushel	0	1	3
Oats, per bushel	0	5	6
English barley, per bushel . . . 3*s.* 6*d.* to	0	4	0
Cape barley, per bushel . . . . 2*s.* 6*d.* to	0	2	9
Malt, per bushel	0	7	0
The 2 lb. loaf	0	0	3½

BUTCHER'S MEAT.

	s.	*d.*		*s.*	*d.*
Beef, per lb.	0	3	to	0	4
Mutton, per lb.	0	3	to	0	4
Lamb, per lb. 4*d.*, or per quarter . .	2	6	to	3	0
Veal, per lb.	0	4	to	0	5
Calves' heads, each	2	0	to	2	6
Calves' feet, per set	0	8	to	1	4
Tripe, per lb.				0	6

According to these prices wheat has fallen below six shillings, which it was at the beginning of 1846; but even at the present prices farming pays well: one

proprietor has said that he can afford to grow wheat and sell it at 1*s.* 6*d.* per bushel without loss to himself. This was Captain Bagot, a well-known and much respected colonist, and one who would not make such a statement without grounds. He, however, reckons that the wheat should be reaped and thrashed by the reaping machine, and not cut by hand. At all events it will pay if 3*s.* per bushel can always be obtained, below which it is not likely to fall, since the large bodies of miners will be constant consumers, and a large quantity of grain is annually sent to the neighbouring colonies, also to the Isle of France, the Mauritius, and England, not to mention other places.

Many articles, besides those I have mentioned, can be grown in South Australia to a profit to the farmer: such are tobacco, hops, olives, grapes, and other plants and trees, all which, or their produce, find a ready market, and command remunerating prices. Tobacco, where grown, has been very profitable when sold for making a decoction for sheep dressing; and latterly some has been manufactured for smoking, and has obtained the prize at the agricultural and horticultural show in Adelaide: if any person thoroughly acquainted with the mode of manufacture from the green state were to turn his attention to this herb, and to be in command of sufficient capital to keep it about a couple of years, or until it were well seasoned and had arrived at its proper flavour, I have no doubt that the cultivation and subsequent process would amply repay him. There is no duty on the colonial tobacco, and the leaf grows to as great perfection in the colony as in any part of the world.

New South Wales has long been partially supplied with capital tobacco, grown and manufactured in the country, and selling at from 1*s.* to 1*s.* 6*d.* per lb. retail, and the raw leaf at from 3*d.* to 4*d.* per lb. The Government duty on this article is 2*s.* per lb. for tobacco fit for smoking, as Cavendish or Negrohead, which two are almost the only kinds used in the bush. Some of the New South Wales tobacco was not long since seized as smuggled by the Custom-house officers: which of itself speaks volumes in its favour, and shows what may be done in Adelaide.

From January 6th, 1845, to January, 1846, the quantity of tobacco imported into South Australia was as follows:—

		Estimated value.
Manufactured	106,985 lbs.	5,070 8 0
Snuff . . .	641½ „	72 0 0
Cigars . . .	4,032 „	1,250 6 11
Stems for sheep-wash	16,664 „	146 10 0
	Total value	£6,539 4 11

The whole of this money might be saved to the colony, and large exports of tobacco be made to any non-producing country.

The Agricultural and Horticultural Society of Adelaide was established some years since, and has been the means of causing much emulation among the farmers and others, who are invited to attend an annual show of produce at which prizes are given for different articles. These shows take place generally at the beginning of February; and the spot chosen

is the park lands, at a short distance from the town. A large booth is erected and ornamented for the occasion, and this is surrounded by a fence, to exclude those who do not pay for admission, whilst the judges are going round and awarding the several prizes. The show day is a general holiday in the town, and the exhibition is attended by all classes, and has constantly passed off to the satisfaction of the inhabitants. Stalls and booths are put up outside the railings of the grand marquee, and serve as stations for the sale of wines, spirits and beer, and also display goodly quantities of fine fruits. The melons are brought in huge loads to the show; one, the size of a horse's head, can be purchased for 3*d.* or 4*d.*; other fruits are not, as yet, in proportion to the melons, on account of the time required before the trees come into full bearing; but these will follow, and before many years are over the colonists will be able to purchase at a cheap rate almost all kinds of both European and tropical fruits. The last agricultural show took place on the 11th February, 1847. The numbers who attended were large, and the scene was graced by his Excellency the Governor and the principal officials of the settlement. It was estimated that 1600 ladies and gentlemen paid 1*s.* each for admission to the pavilion in which the different articles were exhibited, and at least 2000 others visited it after the prizes had been awarded, when it was opened to the public. The pavilion, covered with snow-white canvas, was in length 150 feet, and the tables, which were ranged down the centre, were covered with the choicest fruits, and with all kinds of

colonial productions. With regard to the articles exhibited, the competition for the prizes on wheat, barley, and oats, was much greater than in any former year. The fruit was very fine, particularly the apples and grapes.

It was remarked that the tables were not so abundantly covered as the last year, in consequence of the much smaller quantity of melons exhibited.

The samples of manufactured tobacco were very good, and there was much competition on that article.

The 1st prize, amounting to 5*l.* 5*s.*, for the best sample of wheat, was awarded to John Frame. His sample weighed 66¾ lbs. per bushel.

The 2nd prize, 3*l.* 3*s.*, to Stamford and Burley, weighed 66⅛ per bushel.

The 3rd prize, 2*l.* 2*s.*, to Walter Duffield, weighed 66½ lbs. per bushel.

		£	*s.*	*d.*	lbs.
Barley, 1st prize	John Frame	5	5	0	56⅛
„ 2nd do.	Stamford and Burley	2	2	0	55⅛

The barley shown was none of it first rate; that obtaining the 1st prize was stained; the 2nd dirty; and others containing wheat, oats, and barley mixed together, were not considered worth weighing.

Oats, 1st prize	Jos. Mott	3	3	0	43⅜
„ 2nd do.	Shakes	2	2	0	46⅛

		£	*s.*	*d.*
Maize, 1st prize	G. Baker	1	1	0
Peas, „	Jos. Mott	1	1	0
Malt, „	H. Rickets	1	13	0
Cheese, „	J. Addison			

This latter article was mentioned as being of a very superior quality, but no prize was awarded by the judges.

		£	s.	d.
Bacon, „	W. Duffield	2	2	0
Very superior.				
Hams, „	W. Duffield	2	2	0
Also very good.				
Butter, „	S. J. Jackson	3	3	0
Potatoes, „	W. Duffield	3	3	0
„ 2nd prize	Hardiman	1	1	0
Onions, 1st prize	G. Baker	1	1	0
„ 2nd prize	W. Duffield	0	10	6
Cucumbers, 1st prize	W. Duffield	0	10	6
Vegetable marrows „	Haines	0	10	6
Carrots, „	W. Duffield	0	10	6
Salads, „	Haines	0	10	6
Table grapes, „	G. Stevenson	4	4	0
„ 2nd prize	A. H. Davis	2	2	0

These were very fine samples, and were pronounced by the judges equal to any they had seen elsewhere. Many different varieties were exhibited, and contributed to make a most elegant show.

Wine grapes, 1st prize	G. Stevenson	4	4	0
„ 2nd prize	D. Kavel	2	2	0

The *oranges* and *lemons* were inferior, and none were considered to deserve the prize.

Peaches and Apricots,	G. Anstey	1	1	0
Vegetable seeds	W. Duffield	2	2	0
Collection of fruits, 1st	G. Anstey	4	4	0
„ 2nd	A. H. Davis	2	2	0
Collection of vegetables	W. Duffield	2	2	0
Apples, 20 varieties	G. Anstey	0	10	6
Plums	G. Anstey	0	10	6
Sweet melons	Haines	0	10	6
Water melons	G. Baker	0	10	6
Hops	W. Duffield	2	2	0

The prize sample of hops was very fine, and showed what may be done with this plant in South Australia. The hop is

considered so valuable an article of produce, that it is intended to offer a large prize for it at the next show. All the samples were reported as being exceedingly creditable to the growers. It is a curious fact that the whole of the hop plants in the colony are of the male kind, not one of the female having been hitherto observed amongst those exhibited.

Dried figs	G. Stevenson	1	1	0
Dried peaches	No prize.			
Raisins	J. Gilbert	1	1	0
Bouquet	G. Stevenson	0	10	6
„	G. A. Anstey	0	5	0
Manufactured tobacco	W. Jacobs	3	3	0
Snuff	R. Dodson	0	10	6
Collection of leather	G. Bean	10	10	0
Wine, the butt, 5 gallons	G. Anstey	10	10	0

There was keen competition for the wine prize, and some good judges preferred one of Mr. Duffield's samples to that which obtained the reward. The samples were in rather a bad condition, having been brought from a long distance; some of them, however, give promise of the production of superior wines by the vine growers.

Jordan Almonds	G. Stevenson	0	10	6

Honey, prize recommended to Dr. Addison.

Unenumerated Articles.

Lead pump from colonial metal, by J. Chamberlain, 5*l.* 5*s.* recommended. Brass force pump, also from colonial metal, W. Pybus; this was a beautiful casting. The exhibition also had a church bell and an umbrella stand; 12 horse and cattle bells; a show-board of bell-hangings; and a very large, handsome scraper, made for the Adelaide Lodge of Odd Fellows, the name and number of which appear on the lower part in large raised letters. The judges remarked that these were all very creditable, and much in advance of former exhibitions; 5*l.* 5*s.* recommended.

Messrs. Little and Saint exhibited a brass counter beer engine of colonial metal, which was much admired for its ele-

gant shape, the absence of blemish, and the high polish it had taken; a prize of 2*l.* 2*s.* recommended. Mr. Davis sent some candles, which were considered by the judges as very good. A tradesman of Currie Street brought in a set of horse shoes, which were beautifully made, and attracted the favourable notice of the judges.

Michael Underwood exhibited a beautiful specimen of straw plat; a manufacture which ought to be more common than it is.

Mr. Wyatt had some large castings, all in their rough state; the principal of which was the main part of a 6-horse power engine. The cross piece and brass guide were said to be particularly well cast. The judges remarked that this lot was highly gratifying, as showing the advancement of colonial manufacture. Prize recommended, 5*l.* 5*s.*

The day after the show a public fair was held on the ground, near the grand booth, which was suffered to remain for the sale of fruit and other articles. The publicans' and fruit-dealers' tents were also retained, and it was a very animated scene. There is, however, a great difference between an English fair and one in Adelaide. In the former all the sight-seers are on foot, but in Australia most persons keep a horse, and at the fair appear on horseback, or in gigs, carts, or other conveyances. The weather, on the occasion we allude to, was very fine, and the company, though less select than on the previous day, was pretty nearly as numerous. It is worthy of mention that very few persons are taken in charge by the police either for drunkenness or other offences at such meetings in Adelaide. This is not from remissness on the part of the constables, but from the general good behaviour and moral feeling of the people themselves.

It is common for the farmers to exchange their produce with the merchant for flour, tea, sugar, tobacco, spirits, or other articles; which ensures them generally a good price for their grain, and also a saving in the goods they thus obtain at wholesale prices from the store. It is a great economy for farmers, as well as others, to lay in a large stock of provisions at a time, to last from six to twelve months; and this, either directly the wool or grain is ready for sale, or else when the goods wanted are at the lowest price. In this case the stock comes back to the farm or station in the drays that take the produce to town. The cartage of goods being expensive, advantage must be taken of any such opportunity to procure what will be wanted even months afterwards; this causes the stations to appear like wholesale stores, furnished with many different articles, and these in considerable quantities.

CHAPTER V.

PRICES OF CATTLE IN ADELAIDE.—EXPENSES OF CATTLE FARMING.—HORSES.—CATTLE HUNTING.—BREED OF CATTLE FOR DAIRY.—BULLS.—MILKING.—BRANDING.—BURNING THE GRASS.—HUTKEEPERS.—BENEFIT OF MILKING.—CATTLE OWNER'S LIFE IN THE BUSH.—TEA DRINKING AND SMOKING.—TRAVELLING TO THE STATION.—CATTLE DRIVING.—FIRES.

THE prices of cattle and sheep in the Adelaide markets were as follows on the 1st of January, 1847 :—

	£	s.	d.		£	s.	d.
Fat cattle, per 100 lbs. . .						18	0
Working steers, each . .	4	0	0	to	6	0	0
Dairy cows, each . . .	3	10	0	„	4	0	0
Young stock, each . . .	1	15	0	„	3	0	0
Fat sheep, each . . .	0	10	0	„	0	15	0
Breeding ewes, each . .	0	10	0	„	0	12	0

This is a fair average of the price of stock taking one season with another, and that this price will be maintained I think there is little doubt. The great price of working steers and bullocks arises in consequence of the high charges paid for carting ores and goods to and from the mines, which has influenced the price for draught all over the colony. From 1200*l.* to 1500*l.* will enable any person in-

tending to purchase cattle to select a fine herd, and have every convenience about the station; and with a good run, (which may be procured without any great difficulty,) and proper treatment of the stock, he will have a return of 25 per cent. per annum, with almost no risk. The chief object is, to purchase good stock at first, which is plainly most important to all who intend to make a living by cattle. It is common to see poor, badly bred animals sold at the auctions at low prices, say 1*l.* 5*s.* for a cow and calf; many persons consider them cheap; this, however, is a fallacy, for they are of no use, although of the same expense to keep as the best. They are also coarse and poor meat, never make a large carcass, and are too weak and small to be fit for labour.

The expenses of commencing cattle farming are as follows:—

	£	s.
80 cows in calf, (or with calves at their sides under ten months old,) averaging 5*l.* each	400	0
50 bullocks and young steers, not under two years	250	0
100 young heifers and steers, over twelve months	200	0
2 horses for the herdsman, at 15*l.* each	30	0
2 brood mares, at 25*l.* each	50	0
Building small house	30	0
Stock-keeper's wages, 30*l.*, hut-keeper's ditto, 20*l.*	50	0
Rations for the first year for four persons	60	0
Stock-yards, &c.	40	0
1 dray, bows, yokes, and chains	14	0
2 saddles and bridles	7	0
Axe, adze, augers, gimblets, cross-cut saw, hand saw and saw files, hammer, mortising chisel, and nails	3	0
Spade, hoe and rake, and plough	5	5
Cask for meat, and safe	1	10

	£	s.
Maulrings, wedges, and camp oven, 2 saucepans, tin plates and pint mugs, knives, forks, spoons, butcher's knife and chopper	2	10
For the dairy: 12 milking tins, 3 buckets, churn, milk strainer, 4 butter casks	3	0
Rope, branding iron and hobbles . . .	2	0
	1148	5
Depasturing licence	10	0
Total	1158	5

Thus for the sum of 1158*l.* 5*s.* the number of 270 head of cattle may be purchased; 2 horses for riding, and 2 mares for riding and breeding. If these be of a good sort, and be properly looked after by the master, they will certainly pay 25 per cent. after the first year. Ten pounds will be paid for the liberty of depasturing the cattle on crown lands, and securing the run to the proprietor of the licence. As the cattle increase in number, the run will not be large enough to hold them, and an off station must be sought for to which to send the young heifers. Besides that cattle farming is profitable, and, compared to sheep farming, of small risk, the work is but little, generally pleasant, and much liked by all who are fond of being on horseback, and breathing fresh air in the open country, with almost no anxiety about making a living. The horses are good and cheap; those purchased by the stock-owners being fast, strong, and able to endure great fatigue; and the price for such is only about 15*l.* each. The mares are nearly as useful for the saddle as the geldings,

and valuable, moreover, for breeding purposes. The master will have one or two saddle horses constantly for his own riding, and will have little to do but to enjoy himself. This is the most free and least troublesome life with which I am acquainted. The horses are hardy and perform long, nay surprising journeys, during which they are not supplied with any provender, except what they pick up when turned out to grass after the day's labour is over. Before being let loose they are hobbled or tethered if they cannot be depended upon; but those that can be trusted are allowed to roam where they like, and in the morning will generally be found close to the spot where you have been camping. Thus the cost for their keep is absolutely nothing except when stabled in town, to which place their owner ought not to resort often if he expects to make a profit from his herds, for in Adelaide the living and lodging are expensive; the bill for the horse at livery soon mounts up, and the journey there may, in many cases, be saved.

The horses are surefooted, which is very lucky, for they are frequently obliged, when after cattle, to gallop up and down most dangerous places, amongst stones, rocks and fallen timber, literally at full speed; such places, I think, as few of the English steeple chasers would venture, for a fall would not improbably settle both horse and rider.

It is the excitement of such adventures that forms part of the glory and pleasure of the stock-owner's career. Some of the cattle are often wild, and ramble away for miles; in which cases it is necessary every

week or two to muster them, in order to see if any are missing, and bring them back if they can be found. Every two or three months a general muster takes place, with a view of branding the calves, looking to the increase, and observing the progress that has been made to render them comely in the butcher's eyes. This mustering is a busy time. Some few beasts will no doubt have got away from the proper run, and gone to other herds; these have to be collected from far and near, and those on the run driven in to the neighbourhood of the stockyards. The men who are going any distance are collected and mounted on their steeds, and provided with their travelling requisites, which consist of a tether, rope and hobbles for the horse, saddle-bags containing bread or flour, meat, tea, sugar, lucifers or tinder, tobacco and pipe, stock whip, and many little odd articles of comfort or bush luxury, if it may be so called. They are also provided with a blanket and coat for a bed at night, and a quart tin pot to boil their tea in, with a smaller vessel of the same to drink it from. All these multifarious articles are fastened to the saddle in different parts; the latter being provided with a number of buckles or straps, which gives the fully accoutred horseman a grotesque appearance when he is ready to start. If going very far into the bush, and away from the settled districts, and where the wild blacks are to be met with, a carbine, or pair of pistols, is often added; but this garniture does not much improve the appearance of the party.

Inquiry having been made in different directions in order to fix the locality of the stray cattle, the men

are enabled generally to have some idea where they will find them, and to that place they leisurely make their way; taking care not to distress their horses, as very likely when they come in sight of the cattle they may have heavy work to perform. On arriving near the spot, perhaps forty, fifty, or more miles from the station (for the cattle stray to a great distance sometimes), the company divides and reconnoitres the hills from some elevated position, and endeavours to ascertain where the cattle are feeding; if this is not successful, and brings no report, the parties then try to find the place where they fed, or bedded, the night before, and from this spot they track them to ascertain which way they have gone. There is assuredly much art in tracking, and no person can become a proficient who does not take notice of every little trifling incident, such as the grass being slightly bent down by the feet, the fresh breakage of dead twigs, the moss rubbed from the top or sides of wood or stones, the presence of dung, and other points which constitute the chief marks for observation, and by which also it may be told about how long it is since the cattle were on that spot, and whether they were feeding steadily, or on the march. The cattle being found on another person's run or feeding ground, the greatest care must be taken to single them out from those they have joined, and to leave the strange cattle on their own pasture. To do this often requires great exertion from both men and horses, and it is a very exciting time: the hunters have to chase each separate head out from the herd; drive those they have separated over some hill to a dis-

tance from the mob, to prevent them from seeing their companions; and there keep them until all are selected. This is often a work of time; and much hard riding being required, the horses must be brought fresh into the field, or they will not unlikely *knock up* when most wanted. The whole mob often sets off at full speed, and the separated cattle follow and sometimes mix, and then the work begins over again. In accomplishing the purpose in view, the people must follow the particular beast they are in want of, and first turn him one way, then another, to guide him in the right direction for *you*, which is the very way *he* does not want to go. All this has probably to be done at full speed, and over all kinds of good or bad country, just as it may happen. The men are armed with long whips, the lash being from twelve to eighteen feet according to fancy, whilst the handle is only as many inches. The stock-keepers are very dexterous in the use of these formidable weapons, and can inflict a heavy blow if necessary: the report of the whip is like the explosion of a gun, and may be heard for miles; it is this noise that frightens the cattle, and makes the whip so annoying to them.

A mixed herd of about three hundred head of cattle is sufficient to commence farming with, for they increase very rapidly, and in a few years will occupy a large run. A good colonial half-bred bull may generally be bought at from 15*l.* to 20*l.*, and of these two will be required. In buying a large lot of cattle the bulls are generally given in at the same price as the rest, the seller no doubt taking care that on the whole he is no loser, for the price of the lot generally allows

this liberality. Some of the colonial bred bulls are superior animals, and would command a fair sum in England.

In Australia it is a chief desideratum to obtain a pure Durham or Sussex imported breed, the males of these fetching as much as 200*l*. The Durham breed is considered the best both for milking, draught, and carcass. This breed is the earliest to arrive at maturity; the cattle are good feeders, and soon obtain a great weight, which makes them valuable for the butcher. They are remarkable for the large quantity of inside fat they make, and the meat is of a fine grain. For the dairy the Durham cows are very valuable, being excellent milkers, and yielding a large quantity for a long continuance. Next to these we may mention the Alderney breed, which is sometimes met with in the colony; and although small in size, and of singular proportions, the Alderney cattle should not be forgotten for the dairy, for, although the milk is not large in quantity, yet it is remarkable for richness. This breed eats almost any kind of herbage, such as other cattle would refuse, and fattens rapidly. The Sussex breed arrives at a large size, but is not fit for draught on account of its slowness; but for the butcher, and also for increase, it is valuable. These are the most remarkable breeds I have seen in Australia, and they are found to be well adapted to the climate, and for crossing with the common sorts reared there. When good cattle are once obtained, great care should be taken to keep the increase as pure as possible, or they soon degenerate; and therefore it is the best plan, if the

38318

owner's means will permit, to have a paddock fenced in, so as to keep a bull of good breed separate from the herd, and drive the well-bred cows and heifers into the inclosure when required. This, and castrating all the bull calves when young, will allow the heifers to attain a sufficient age before rearing a calf; and, as many are ruined for want of this care, it should be particularly attended to. As it is, many heifers bring forth calves when only about eighteen months old, in which case the increase cannot be expected to grow to a proper size, and the heifer is deprived of that strength and bulk which it is so important she should reach. In a word, heifers should always be two years old before they are suffered to breed, and then strong healthy calves may be expected. The stress upon the immature animal from the calf she has borne, and the drainage of the milk from the system, necessarily tends to arrest her growth and due development.

Even fences are not always strong enough to keep the breed of cattle select, or to enable you to profit by the services of your valuable bulls, as the following will show:—A gentleman in the colony, who purchased a fine Durham bull at a high price, as he considered it necessary to keep it from the mixed herd, had a large meadow fenced off on purpose to isolate his prize. Here it was kept, and the best cows were turned into the paddock from time to time. The noble creature was seen and approved of by some dishonest people, the fence broken down, and their own cattle driven into the inclosure. This will show the tricks resorted to, also the great

value placed upon a superior breed, and the expedients and risk which persons will run to obtain it. Such doings are one nuisance. Another is the custom of all poor people, who have one or two cows of their own, of keeping a bull calf, even though it be the most ill-bred miserable creature that can be imagined; such young bulls roam about from herd to herd, fighting with each other, teazing the cows, and doing all possible damage to those desirous of improving their stock. As all the different herds feed in the open unfenced country, there is no remedy for this, except perhaps shooting the bulls, and standing the damage for the act; even this must be better than having stunted ill-formed young bulls running riot amongst your choicest cattle.

If you have made up your mind to commence cattle-farming, you will, I think, find it the best plan to obtain an insight into the ways practised in Australia; and with this view to bargain with the person you buy your cattle of, to allow them to continue on his run amongst his herds, until such time as you have got the requisite information, and a good run for your own purchase. Most settlers will be happy to enter into this agreement with you, on condition that you make yourself useful to them in the meantime, and nothing will enable the cattle-farmer to learn so much as this course. In six months you will have gained sufficient information to manage for yourself, and, after finding a convenient station for the cattle, you must at once erect a hut and strong stock-yard on a dry spot; the stock-yard may be divided by a strong fence down the centre, besides which, milking-bails and calf-pens will be wanted.

Two huts can be built; one for yourself, and another for the stock-men and hut-keeper. These will cost but little if all lend a helping hand. The timber will be split by men who earn their living at this kind of work, and the stock-yard, requiring to be very strong, had better be put up by them; care being taken by the master to see that all the posts are strong, and that the mortices, into which the rails are fitted, are well filled up, so as to resist the enormous pressure that the erection will sometimes experience when the yards are crowded with cattle.

A garden should be fenced in; and this will be kept in order by the hut-keeper, or all the lighter work may be performed by the master himself, if he be fond of this kind of employment.

When the cattle arrive on the run, separate all the newly calved cows, and regularly milk them; nothing tends so much as this to make them quiet, and besides that you have the profit of the milk, the calves are generally quieter, and more useful in every respect by this treatment. Either butter or cheese may be made, and the spare milk given to the pigs, which will help to fatten them, and supply the station with ham, bacon and pork. It is not common for stock-owners to trouble themselves about the milk, especially if they have many cattle; but yet they know the advantages and emoluments of it, and are most willing to allow their men to milk as many cows as they like for their own use.

In South Australia cows are only milked once a day, viz., early in the morning; and during the day the calves run with them on the feeding grounds:

at night they are brought in, the calves shut up in their pens, and the cows remain near the yards until morning, when they are driven in to be milked. When cattle are first brought to a run, they require great care to prevent them making back to their old pastures; and therefore, for at least three or four months, they should be watched during the day by a man, either on horseback or foot, whose duty it is to keep them from separating, to look after them all day, and drive them to the yards at night. It would be advantageous to have five or six acres of land well fenced in with a strong post-and-rail fence, and, instead of yarding the cattle every night, to turn them into this inclosure, where they would have plenty of room to move about and keep themselves clean, and be in better condition than when crowded into a small stock-yard, which in wet weather will not allow them to lie down in consequence of the dirt. The greater number of cows calve from September to December, and the calves should be weaned when about six months old. When this process is not attended to properly, much harm is often done to the cows by steers or heifers as large as the cows themselves constantly sucking them; butting away the young calves, and not unlikely maiming them for life. Twice a year the cattle are collected for counting, and the calves for branding and cutting; and the young heifers are drafted out from the rest, and sent to the heifer-station, if one have been established, or else kept in a paddock separate from the herd. This again is a busy time, and an extra number of men are engaged, or else

the services of the surrounding settlers obtained, each making it a rule to help himself by helping his friends in emergencies. Whenever a calf is branded, a description of its colour and sex is entered into the cattle book, which is kept to enable the master to know each separate beast, and to be able to give a particular description of it if astray. Unless this were regularly done, no owner could remember the details of his herd, and many mistakes would result. The irons for branding are made in the colony, and consist of a stamp with some letters or mark upon it to distinguish each person's cattle. These irons are heated in a large wood fire outside the yard, and, while the animal is roped or firmly held, the hot iron is held close against the skin until the surface is scorched, and forms a mark that never wears out if properly made at first. Each separate herd is marked on some particular part of the animal; for instance, the right or left shoulder, the hip, or side; and by this means the cattle are known when even in a large herd and at full gallop, and all the different brands may be detected.

In South Australia cattle are almost free from disease, neither the black-leg nor influenza having done any damage, or, to my knowledge, so much as made their appearance. In some parts these diseases have been fearfully destructive; but in that colony nearly all the cattle die the "natural death" of such animals, being killed for their meat and hide, or if very aged, either dying of real old age, or being killed and boiled down for their tallow. The immunity they enjoy from disease of all kinds can only be

accounted for by the fact of their being constantly in the open air, and in their natural state; there is little doubt that if they were housed, and fed with artificial food, they would soon become subject to all the complaints prevalent among the English cattle.

The springs of water in Australia are many of them brackish; but, although the water is unpleasant to man at first, yet the cattle thrive well upon it. Indeed, according to the following extract, it would seem to be requisite for them:—"It should never be forgotten that salt is essential to the health of cattle. Wild cattle regularly visit the *salt licks* in North America, and in South America the herds absolutely require the *barrero*, for so is called a saline or nitrous earth which the herds of horned and other cattle seek with avidity, and without which they fail and die in about four months. From the twenty-seventh degree of south latitude to the Malovine Islands, the horned cattle, as well as other animals, have no need of the *barrero*, because the water and the pasture grounds are sufficiently salt; but northward, beyond this latitude, the *barrero* is necessary, and the plains which do not contain it do not feed either the horse, the ass, the mule, the ox, the goat, or the sheep." Such is the account of the salt licks given in Knight's *Farmer's Library;* and I have little doubt that the frequency and abundance of salt springs in Australia is a great blessing to the country, and that without them, or salt given in food, the cattle would not thrive. There is no part of the colony that has yet been discovered that does not contain salt,

either in springs or in the earth, and which the cattle have one way or another an opportunity of obtaining.

Whenever it can be done, the whole of the run should be set on fire and burned, to destroy the coarse sour grasses and plants, and make room for a second and more abundant crop. If this burning be done just before rain, it is astonishing how rapidly a new crop will appear; instead of a black, dreary, and apparently barren surface, two or three days will show a green and luxuriant herbage covering the whole extent of burned ground. Besides the good that is done to the pasturage by the fire, many noxious reptiles are destroyed, which would otherwise be a nuisance, and might do much damage. Many snakes, for example, are thus annually destroyed; for snakes frequently live in old logs and stumps of trees, which easily catch fire and gradually smoulder away. The grass in the bush is burned almost every year, either by persons purposely setting it on fire, or else accidentally, by the fire from tobacco pipes blowing about; or not unfrequently by people sleeping out all night in the bush and having a fire, which, when left, blows about and sets the long grass or leaves in a blaze, which soon communicates. This might be accounted a sad event, and great injury would naturally be expected from it. The fact is, that the damage is trifling, and the gain immense; and therefore the deliberateness of the incendiarism need be no mystery. When the hot weather has set in a month or two, the grass and herbage become thoroughly dried, and are not palat-

able to cattle; but when burned, and a shower of rain has afterwards fallen, the roots send up strong fresh shoots, full of moisture and nutriment; and, instead of the dry burned country, the whole appearance is changed, the cattle thrive, and the alteration is almost magical in its rapidity. Thus like cures like,—"one fire puts out another burning."

On account of the general scarcity of female domestic servants, and the high wages they obtain where they can be procured, also the certainty of their obtaining husbands, it is found necessary to engage men as hut-keepers and cooks, who likewise do the milking at the dairy stations, the lords of the creation being obliged to engage in many things which are not thought to belong to the sex in England. Many hut-keepers, from long experience, become capital house servants, washing, starching, ironing, making beds, cooking, and doing all the indoors' work, inclusive of mending and washing bush clothes of every description. I knew an old man, now dead, who was perfect in all such matters, and would have been a pattern to many English servants. He used to bake and cook, keep the house clean and in order, wait at table, wash the clothes and *'get them up*, and cook for from ten to twenty men, according to the season, in addition to his other work for his master. This man had been an old sailor, and was much respected. He died at an off sheep station, and was buried in sight of his former hut, this mode of sepulture being common enough; for, at a distance from the towns, the dead are buried near the spot where they die; and the grave is generally

placed under some handsome native tree, or in a sheltered nook, and then fenced round, and in some places a rude head board is carved, and put up to mark the spot. In one of these distant scenes there is much more feeling displayed, in a rude but sincere way, than in the splendid obsequies of the dead in England, where nothing from birth to death is thought of but show and effect.

But to return to the cattle station. Nothing, as before observed, improves cattle so much as constant and regular milking, and if this be attended to properly there is little doubt of its profitableness. Cattle that are not milked are always comparatively wild and unmanageable; their offspring also take after them, and will think less of jumping over a fence than of allowing themselves to be handled or approached without attempting to butt and clear away every thing before them; and this, when only a month or two old. When such cattle get older, they either turn round and face any stranger, or else at the slightest rustling of the trees, or other sound, fly off at full gallop, tearing over hill and dale like wild colts more than like the respectable fat cattle they ought to become. Where the cows are milked, they presently become steady and well broken in, go quietly into the milking-bail, and either in the yard, or on the run, allow the men to approach them without fear. The calves soon get accustomed to be handled, and, if properly treated from their birth, they never forget it, being readily broken in either for draught or milking, and much sooner fattening and becoming fit for the butcher. At a dairy station, as

soon as the heifers or cows calve, they are put into a mob by themselves; these are all milkers, and are tailed or followed throughout the day by a boy, whose duty it is to yard their calves at night, and to see that they do not stray away during the daytime. The milking-sheds are much as in England; and as the whole process is on nearly the same plan, it is unnecessary to describe it. The cows, as I said before, are milked in the morning, after which the calves are allowed to feed with them till night. The milk is set by for butter or cheese; and after being skimmed, any refuse is used for fattening pigs, which last should be kept at a dairy to consume the waste. Butter and cheese always find a ready market, and are sure to pay the expense of milking, besides keeping the station in provisions. I do not know that any great profit can be made by dairy farming as a business except in the respect I have mentioned, of rendering the cattle quiet and tractable; but this alone will amply compensate the owner for his trouble and expense. The outlay will consist in building a long shed fitted up with bails for the cows to be milked in; digging an underground dairy, and furnishing it with the necessary utensils; and hiring an extra man and a woman to attend to the churning; also a little boy to look after the milch cows during the day. These items for the first year may cost about 80*l.*, but the next year much less.

The well-bred cattle in South Australia are usually large, and easily fattened, sometimes weighing from eighteen to twenty hundred weight; but above this is considered heavy, and such animals are scarce. The

flesh is equal in flavour and fibre to any fattened in England, and might be still improved if the cattle were allowed to attain a better age, and were, in fact, never killed under at least four years old. At present they do not often attain their full size, but are slaughtered in the second year; although it ought to be borne in mind that cattle grow until they are about five years old, when they are in their prime.

In order that some idea may be formed of the cattle-owner's life at his station, let me imagine the reader to be the master, and in his bed, in a hut like the generality in the Australian Bush; and, further, suppose that about his usual time (daylight) he awakes and opens his eyes. His bed-room shall be formed of slabs of wood fitted into a groove at top and bottom; the top is the wall-plate, the bottom the sleeper or foundation; these slabs put close together make the walls all round, except in one place where there is a window, and in another where there is a door. The window is not often glazed, but more generally covered with calico; or perhaps it is only a kind of trap-door, that lifts up to give light when needed, which is but seldom, for the sun shines through the crevices of the hut with sufficient force to make formal apertures unnecessary; which crevices also keep the hut cool in summer, and when winter comes are daubed up with clay if requisite. After washing and dressing, you become anxious to see the progress the hut-keeper has made in his work; and, opening the door, you find yourself simultaneously in your parlour, drawing-room, and kitchen. This is furnished with table, chairs, or

stools, the latter rough but strong; and with slabs or boards as shelves, on which are ranged your stock of plates and crockery, looking meagre and scarce enough, but supplied by an extra number of tin pots and plates, which remind you of the constant breakages by your male attendant, against which you are now provided by these more durable articles. One more shelf is seen containing a number of bound books, and perhaps a late English paper or two (about five months old); for the huts generally have some shadow of a library, which strangely contrasts with the rough woodwork, the naked thatched roof, and the tempered clay or lime floor. The gentlemen in the bush are great readers, and think little of riding twenty or thirty miles to borrow an amusing or instructive work. This cannot be wondered at when we consider the monotonous life they would lead without this pastime, and the little interest one can take in the conversation of a companion or man with whom one has been living perhaps for years, and whose every tale, and even thought, have long since been exhausted. In such a place and situation, who can express the satisfaction, the intense pleasure, of finding a book containing new and interesting information, or the avidity with which it is devoured, the fortunate reader sitting into the hours of the night, and not allowing meals to interrupt him long, until the last page is finished, when the craving is to gain intelligence of the whereabouts of other such precious treasures?

After seeing that the hut-keeper has commenced clearing the hut, and preparing breakfast, you go out at the door, and are greeted by the sunrise,

which should be the bushman's signal to commence his daily work. About fifty or a hundred yards from the hut are your stock-yard, men's huts, dairy, pigsties, and other buildings; and around these you see the milch cows standing ready to be driven to the bails, while their calves are kept in a separate pen or fold, dry under foot, with a bedding of straw, and secure from their enemies the wild dogs. The men are all up, and preparing to milk, and the stock-man, with a thin cloud of smoke issuing from his mouth, is seen in the distance, carrying his bridle in his hand, and tracking his horses, after finding which he will drive them to the huts, to be ready for use. On the side of that bank of clay may be seen a door from which a man has been passing to and fro with clean milking buckets, and tins that glitter in the sun. This is the dairy, which is dug out in the ground like a cellar. Such dairies are often about thirty feet long and fourteen wide, the walls built up with stone, and heavy beams, with boards on the top, forming the roof, which is covered over with earth, and, when finished, is somewhat like the entrance to a railway tunnel. In the interior a row of tables, or more properly very broad shelves, is placed about breast-high to set the milk upon, and down the centre may be seen a large table and other apparatus—as churn, salting-tubs, and the like. On each side are ranged the milk tins, clean and bright, and filled with yesterday's milk, which would have been sour and useless if not preserved with the greatest cleanliness in such cool places. Just outside the door is a large cask half-full of skimmed milk for the pigs; or, if pigs are not kept, a puddle is ob-

served, where the skimmed milk is thrown away. This is sometimes done, but is a wasteful act. At a little distance from the dairy there is a shed, where a large copper is built up, with a stove underneath, to heat water for washing the milk utensils and keeping them scalded. This cleanliness must be particularly attended to, or the whole thing will turn out ill, the cheese not be saleable, and the butter be only fit to grease the dray wheels.

After looking over the rest of the establishment, as the piggery, arable land and garden, your breakfast is ready, consisting of either a damper or leaven bread, bacon, ham, beef, fowls, eggs, mutton, butter, or cream. All these ought to be the produce of your own farm; the only foreign articles are tea and sugar, but which have been supplied you by the sale of your butter. During breakfast, you settle the mode of passing the day, whether you will stay at home to garden, or work among the cattle; take a horse and look over the run; see a friend at some near station; or take the dogs and hunt the wild dog, kangaroo, or emu; or sally out, gun in hand, accompanied by a pointer, to shoot quails or ducks; or creep after and get a chance at the native turkey, which is capital eating, though the best fare in my opinion is the bronze-winged pigeon, a beautiful bird, which is a general favourite at table. Perhaps some butcher or cattle-dealer has come into the neighbourhood to purchase fat cattle, and take a ride with you to the place where your herd are feeding, to look them over, find fault with the breed, and talk about the low price of meat.

This you treat as "all gammon," little heeding any remarks of the kind; but you endeavour to make the best bargain you can for ready money, or at least for a check on the bank. You must beware of the buyers, for they are never pleased with a beast. If you have any animal that you particularly admire, and expect to make a high price by, you are sure to hear the buyer talk in a disrespectful way of your favourite, and find all kinds of fault with it. If, after you have sold it, you want to be convinced whether your judgment be good or not, try to purchase back the beast; and you will then see the difference between the buyer and seller. After a long deal, you probably make some sales, when the whole *mob* is driven to the yards, and, the sold cattle being draughted out, you help to drive them a couple of miles along the road beyond their old run, after which they go steadily on to the town.

Whoever comes to your hut, whether a stranger or not, drinks with you, not wine but tea, for which the kettle is always on the hob, to be ready for any new arrival. Tea drinking and tobacco smoking are in vogue among all classes, and serve to while away many a dull hour. If in the bush you are hungry and without the means of obtaining food, then the advice is,—"Light your pipe and smoke;" so also, if thirsty,—"A smoke will relieve you." If tired, there is nothing like smoking; and if particularly lively and happy—smoke; if you have made a good bargain—smoke; if a bad one—still smoke; but if you despise the weed, do not smoke, but be miserable and churlish with yourself and querulous at every

trifle. Some of my readers, and these not of the fair sex, will hardly admire this indiscriminate use of the pipe; and will hold that, if at any time, it is only at dusk, after the day's work is over, that the pipe should be brought out. Such is the rule of English propriety, but it is out of its latitude in the colony, where you feel that something is wanting every couple of hours, and the only *fill up* of that want is smoking. The habit is thought indeed to be any thing but agreeable by those who have not experienced its refreshing and consolatory influence, and such inexperience is common among new comers. I well remember one old gentleman using severe language to his son for smoking in the morning, and showing with respectable rhetoric that it was a blackguard habit, and indicated a low and debauched character. His argument could not have been good, for in less than a week I saw him looking after some of his cattle, with a short pipe in his mouth, although he had not then had his breakfast.

During the heat of the day, if no particular work presents itself, you remain in your hut to talk or read, smoke and drink tea; but if you are busy, either draughting, branding, or seeking cattle, you pay little attention to the broiling sun. There is plenty of excitement attending many of the common occupations of cattle farming, such as hunting and sorting out the cattle on the runs, branding and draughting them in the yards, yoking and breaking in the young steers for draught, all which have to be done among most likely a good proportion of wild and savage-looking cattle. Some of the old stock-keepers are as

cool as possible, even in a yard filled with a mixed lot, among which are many termed Russians; and have only a small staff waddy, or knobby stick, wherewith to protect themselves. You may perhaps see one huge beast look at the stock-keeper for a few seconds, and begin to scrape the dirt up with his feet, evidently meaning mischief. The man shows no timidity, but watching when the brute comes at him with his head lowered, ready to throw him a somerset in the air, he gently, and commonly with the greatest unconcern, raises his stick at the exact moment, and giving the brute a tap between the horns, brings it to its knees for a couple of minutes, from which it gets up looking very stupid, but a wiser and a better beast for all that. Presence of mind is always required among cattle, which nothing but being accustomed to them and their habits can give. It is, however, rare to hear of any accident happening to the men through their ferocity; indeed, they only want determination and courage to put them to the right about.

Dinner is generally on the table at two or three o'clock, and consists of vegetables and salads grown upon the farm, and meat reared and fattened upon the pastures surrounding. It is accompanied by tea, which makes its appearance at every meal; and among the polite you may be asked to take a cup of tea instead of wine during the repast. At the tables of the rich and luxurious the difference is not seen between Adelaide and England; yet the difference ought to be great for any man who has to make his fortune and provide against a rainy day.

It should always be remembered that the master's eye makes the horse fat; which rule applies to sheep, to cattle, and to every thing. Always, therefore, contrive to look after all the concerns about the station yourself; to see that the dairy utensils are scalded and clean; that the cattle are not kept too long in the yards for milking; that the calves and pigs are dry and littered down; the horses well looked to, and their saddles duly stuffed and cleaned to prevent injury to their backs. Unfortunately too little attention is paid to this point; and almost every horse over five years old either has, or has had, a sore back, some being thus completely ruined and useless at the age when they should be in their prime. I advise the emigrant to take out one or two good saddles, but let them be strong and well made, without "fancy-work," and provided with straps and buckles wherewith to fasten on a coat or a blanket.

All work is over about six P. M., and tea ready; and if no friend or traveller is passing the night at the station the evening is consumed over a paper or book, accompanied by smoking and tea drinking; or, if you please, your horse is put in requisition to carry you to a friend's hut, or whithersoever pleasure attracts or business requires.

It is, I confess, difficult to convey an adequate notion of the mode of life in the bush, so very different is it from life in England; but it may not be amiss to observe that nearly all people who enter upon it grow fond of it, and become enchanted with its freedom and happiness, its healthfulness and buoyancy; and that few wish to exchange it for the bustling, crowded

occupations and life of cities. Those also who thus become enamoured of a state which can hardly be called civilized, are not poor, ignorant, or vulgar men, but often persons of talent and education, brought up in their native land amid luxury and abundance, with all their wants supplied and their cares forestalled. This class, at any rate, is met with every here and there, and a more light-hearted, happy and independent set of gentlemanly fellows is not to be encountered. Every station boasts of its hospitality to strangers, a virtue, however, which, in Australia, is confined to no one class; but, besides mere liberality, you meet with genuine kindness and good breeding in the depths of the forest, where you might expect only savagery and insult.

In travelling in the remote parts, it is not uncommon to meet a dray, or perhaps two drays, loaded with provisions, furniture, boxes, a plough, harrow, guns, axes and saws, bedding, cooking utensils, yokes for oxen, ropes, and a host of things too numerous to mention, and accompanied by a family of persons, young and old, father, mother, sons, daughters, with a greater or less number of labourers, some riding, others walking, and others again half-asleep on the drays, but all looking tired, and desirous of their journey's end. These are new arrivals making their way through the bush to a section or two of land purchased or rented, but which it is hoped by them will be their future happy home; and, however tired and weary with travelling, all are sanguine and buoyed up with the prospect of making a fortune, or obtaining a comfortable living; and although far from

neighbours, of being able to enjoy the friendship and intercourse of their own homestead. The father and mother look with pride on the stout athletic sons, and recognise them in their altered dress as the *beau idéal* of the farmer, or bushman. The daughters think of the nice butter and eggs they will have from their dairy and poultry; and they all reckon on good crops, and speculate that they will astonish the natives with their neat house and superior culture.

They have brought with them good seed wheat and potatoes; flower seeds for a garden; vine cuttings and fruit trees to plant; and much else; not omitting a few cows and pigs, of which the latter may be heard grunting and groaning as the dray rumbles over the stones, or grinds through the ruts. A few fowls are observed in a crate on the top of the dray; and in a basket, covered from the sun by a bag or coat, there is a "cold collection," of meat, pies and other articles of food brought from town, with a bottle or two of wine for the female travellers, and something stronger for the male part of the family. If, reader, you ever find yourself in one of these drays, be careful of your spirits, or the men in charge of the cattle will drink them, and say that the bottle has fallen off on the road. Generally speaking indeed, your stock of wines or spirits will not last long, and, if you make any considerable stay in the bush, you will forget the taste of both, not being able to procure them nearer than twenty or thirty miles off. Public-houses are rare after the first twenty miles out of town, and for this good reason men are seldom found tipsy at the out-stations; and perhaps, on account of

the same constrained abstinence, they frequently take too much when they can get it.

During the heat of the day, the dray stops for a couple of hours under a shady tree, near which there is water and food for the cattle, which are turned out to feed, and a fire is made not far off, on which a kettle of water is soon boiled for tea; then the basket is brought out, and, all being tired and hungry, ample justice is done to its contents. When the heat has a little moderated, the cattle are again put to, and the journey continued till night comes on, or the convoy arrives at its place of destination. For description's sake we will suppose the arrival to be the case, and will now introduce the reader to the next scene of the drama.

The sections commonly are of eighty acres, or thereabouts, and when the party arrives the land is in a state of nature, except that all around the allotment may be observed pegs or stakes of wood driven into the ground at certain distances. These are placed by the Government surveyors, and mark out the boundary of the allotment. Saving these, all is "natural." The morning after the arrival is spent by the male part of the little settlement in looking about their land for a site for their future house, which must be conveniently chosen near water, and wood for fuel. Such a situation being found, the work at once commences of unpacking the drays to get out the axes and other tools. The settlers (as they must now be considered) work like horses, soon blistering their hands, whilst the colonial labourers they have with them (and who brought down the drays) take it

much more pleasantly, and, although resting and smoking now and then, get through plenty of work without the same wear and tear as the new comers. Until the hut is finished, a couple of men cut two or more "forks" and a long pole, and placing the forks in the ground and the pole upon them, the ridgepole of a place of shelter is thus provided. A tarpaulin or piece of canvas is stretched across it, and with the ends fastened down close to the earth, forms a regular tent, such as the gipsies use; this is set apart as a sleeping place for the females; the men find their accommodation on the open section, and all they want for shelter is a blanket beside a good fire. At daybreak all are up and busy, one looking after the cattle, another falling a tree for some part of the dwelling. The females soon learn the cooking, for there is small choice of dishes; a little salt meat, fresh beef or mutton, is about all the new comers can have, and plain boiling or baking suffices, for the labourers come home ready to devour any thing eatable in whatever shape. The master and his sons having found a suitable place for the hut, a tree is soon felled, and the labourers split it into slabs and other pieces for building. The hut is up in about a week, and then the family have time and opportunity to look about them, and to fence, plough and dig; build up dairy and fowl-house; make a sty for the pigs; and, when this is done, enlarge the hut or build a new one of stone or brick, after which the old one serves for the men employed as labourers; and thenceforth every thing goes on regularly. We pass that same "natural" place in twelve months' time,

and see one or two stacks of wheat, a man thrashing in a good barn, a comfortable house surrounded by a pretty and useful garden, stocked with vegetables and embellished with numerous flowers, the seeds of some of which have been brought from *home*, and are cherished on that account: in a word, where nothing but open *bush* was seen a year before, there are now the symptoms of thriving industry. Health and happiness beam on every face, and hardly any one would recognise the strong men and lads in their homely appropriate dresses, as the same with the party of shabby genteel emigrants noted on the journey down.

This is one picture, and a bright one; many are darker, not from any fault of the climate or soil, but from carelessness and negligence, which in Australia, as in England, entail want and misery. The pleasanter but more expensive way of commencing is to hire men to build the hut, and to make every thing comfortable for the family, before the latter ventures into the bush; but in the interim the family must be living at great expense in town. The general object should be to spend as little money as possible, the steady pursuit of which object does not interfere with the health of the party. Many persons almost live in the open air, without any shelter over their heads at night; but without engendering sickness, or feeling the miseries that would be expected, and descanted upon, by the inexperienced.

It is a pretty sight to see a herd (or mob) of cattle rushing along at full speed, making the ground tremble beneath their weight, and all guided by two or three men on horseback, who ride after them, now

here, now there, sometimes galloping before them, crossing in their front to slacken their pace, which, if kept up until they were nearly exhausted, would defeat the object of the pursuers, for in that state the cattle are sullen, will neither be driven one way or the other, and not unfrequently rush after the drivers, who are obliged to "clear" out of the way as soon as possible. This cattle-driving is a very exciting, healthy, and pleasant exercise for any one fond of riding; and what makes it better is, that the horses are good, agreeable to back, seldom knock up, and are altogether desirable. They are also sagacious, enjoy the sport, and perfectly understand what they are about; many of them know the particular animal they are after, and keep close to it, turning as it turns, and seldom fail in their object of separating it from the others. One of my friends had a capital roan horse who would follow any particular head, and, if the cow or bullock did not go by fair means, the horse rushed at it and bit it so sharply as soon to claim its attention, and direct it the proper way. On a horse like this there is little to do but keep a firm seat and crack the whip; the horse will manage all the rest. After being ridden at a rapid pace sometimes for the greater part of the day, at night the saddles are taken off, the hobbles put on the fore feet of the horses, and then they are turned out to get what they can to eat, which they soon accomplish, there being seldom any scarcity of rich, strengthening grass when the land is good. Sometimes, however, the country for miles round is burned up, the grass

all destroyed, and nothing is to be seen but a landscape as black as a coal.

We must say a few words on these burnings.

When the grass is long and rank, and is set on fire, the blaze extends rapidly to a great distance, consuming all things in its progress, destroying vermin and numberless reptiles, and marching along in an unbroken line, all behind it black, dry and smoking, and all in front like the long stubble of a wheat field. When a dead tree or log comes in the way, the flames shoot up and roar whilst devouring the tangled grass collected among its twigs and branches, and then the fire passes onwards, leaving enough behind it to consume its prey gently, which it does without any residuum but a small scatter of white ashes and bits of charcoal, to show the spot where the mighty tree had lain. When the dense stringy-bark forests are in its line of march, the sight becomes singularly grand. The underbrush being thick and compact, and the trees covered with a dry fibrous bark, in appearance like the husk of the cocoa nut prepared for ropes, many of the trees also dead from former fires and tottering with decay, others measuring their length on the earth and piled one upon another, and the dead intermingled with the living; when all these circumstances combine, the flame is vast and mighty, and the effect majestic. The bark of the trees, when on fire, appears at night like a bright pillar, made brighter and clearer by the winds fanning the flame, and illuminating the parts close around, only to make the darkness more thick

and dark. Every now and then a thundering crash is heard, and re-echoes from hill to hill, as some giant of the forest comes ruining to the earth, bearing all before him, and sending up a shower of sparks in compactness like one tremendous blaze. The wild animals speedily scour away from this destruction to their lairs; and many of the smaller creatures are no doubt burned without a chance of escape. Sometimes, in large forests, the smouldering trees keep on fire for whole days; some having lost their heads or upper branches, and being hollow, flare away like huge chimneys, the draught through them keeping up a constant blaze until they fall piece by piece, and nothing at last remains but a large hole in the ground, where the roots have been burned out. Some kinds of wood, if once ignited, gradually consume until they are gone; this is the case with the casuarina and divers of the acacia tribe. I have noticed some of these when set on fire, and have afterwards found that not a leaf, twig, or bit of bark was left; but in their place the shape of the former tree is marked out in white ashes on the earth beneath. When the fires are advancing in the direction of any fence or building, the people must be prepared with green branches of trees to beat it out from amongst the grass; if this be spiritedly done and a little judgment exercised, the danger will soon be past, especially as most of the farms are made bare, and the grass well trodden down around the fences by the cattle and sheep, and also have roads which serve as gaps, leading in one direction or the other. Where a road occurs to the fire it often puts a stop to its further pro-

gress, unless any bunch of grass, or bit of dry wood, or even a few leaves, make a kind of bridge for it, when it again gathers strength on the other side, and continues its passage over hill and dale. In this way on one occasion I observed a distance of thirty miles blackened by the fire, which might be seen smoking as far as the eye could reach. The South Australian grasses are not so coarse, thick, or rank as the grasses are reported to be in America, where a fire is particularly to be dreaded by man and beast, and almost every living thing in its path is overtaken and destroyed. In Australia, unless the wind is very high, the fire comes gradually on, seldom faster than a common walking pace; but, if it be more rapid, a bare spot can easily be found, or else a fresh fire being made and allowed to burn all round makes a resting place of security where you may even sleep without fear. Whoever has seen a crop of wheat or any other grain on fire knows well the difference that is made by the luxuriance and height of the material; the flames in this case are like a wall, which flies along at a tremendous rate at the top, and afterwards consumes the bottom or coarser part. In a large plain covered with such materials, and on fire, there would be little chance of escape; and few lamentations would be allowed, as death would be too instantaneous. From this danger, however, so formidable in America, the Australians are happily relieved.

CHAPTER VI.

SHEEP IN AUSTRALIA.—LAMBING TIME.—SHEARING.—WOOL.—EXPENSES OF SHEEP FARMING.—PROFITS.—DISEASES OF SHEEP.—WASHING THE WOOL.—RUNS FOR SHEEP.—LAND REGULATIONS.—RENTING LAND.—LICENSES FOR RUNS.

THE number of sheep in South Australia at shearing time, in the year 1846, amounted to 480,669; and, as all unweaned lambs were excluded from that sum, the quantity now would be at least 50,000 additional. The average of wool from these is $3\frac{3}{4}$ lbs. each, and the whole weight exported in 1846 was 1,331,788 lbs., valued at 72,235*l.* 12*s.* sterling.

No sheep farmer who wishes to rear a good, strong, healthy sort will expect to have more than one crop of wool, or one dropping of lambs, in the twelve months. The lambing ought to be so managed as to commence in August, and be all over by September, whereby the general work of the station and the tending of the sheep will come together.

Great care should be taken, during the lambing time, to bed the sheep every night in a clean yard or fold, and early every morning to separate the lambs dropped in the night, and the ewes belonging to

them, from the rest of the flock, and place them in a more roomy fold, or in good feed close at hand. Many young ewes, with their first lamb, pay little attention to its wants, and allow a strange lamb to take their milk; this must be guarded against, by shutting up the ewe and lamb in a pen made of three hurdles, and tying the ewe's head up, when the lamb can obtain the milk; and the mother, after a day or two of confinement, will take to her offspring, and not afterwards neglect it. As soon as any ewe has lambed, she is drafted with her lamb into the lambed flock, which is taken only a short distance from the hut, to feed upon some clear hill or plain, the grass on which has been reserved for that purpose. Some good shepherds rear as many as ten lambs to the same number of ewes, but this is far from general; where one does this, a hundred do not rear more than an average of from seven to ten. A very good lambing is from eighty to ninety per cent. on the ewes; could this amount be depended upon, sheep would pay much better than they commonly do.

The sheep generally lamb during the rainy weather, when the grass is green and full of nutriment, and the ewes are well supplied with milk; this is a great advantage to the lambs, which, were they dropped while the feed is dried up by the summer's sun, would be half starved for want of sufficient milk. On the other hand, however, many, both ewes and lambs, die in the winter or rainy months from cold and wet; for during this time it is not uncommon to have hard pelting showers of rain accompanied by piercing wind; which makes the young lambs cold and miser-

able, and they lie down under any shelter they can find, often become benumbed, and soon die. In my recollection, in one afternoon, at least fifty lambs out of a flock were killed by the bitter rain in less than a couple of hours.

The wild dogs are a sad nuisance in lambing time. These beasts seem to be aware of the helplessness of the poor creatures, and are constantly watching to destroy them. They are guided to the fold by the incessant bleating of the young lambs, and also follow them on scent over the whole tract of country they have passed through during the day, until they arrive at the folding ground, where they prowl about to take advantage of any opportunity that may offer. The best guard against them is a good watch-dog; but in some places they are too numerous for any single dog to keep away. It may be asked,—Why not keep a pack of watch-dogs? I answer, that this would be as bad as the evil intended to be remedied; for, during some parts of the year, dogs' meat is scarce, and at such times a sheep must be killed to provide the pack with meat. After the shearing, dressing, weaning, and draughting are over, the deaths should be rare when the sheep are free from disease; and, if so, the tribes of tame dogs, being pressed with hunger, would perhaps forget their manners, and turn round and destroy the property they were kept to guard. At lambing time they would find plenty of food from the number of lambs which die, and from the ewes which are cut off in lambing; again, at shearing time sheep are killed for the extra number of men employed, and some also are perhaps

destroyed by drowning while washing, by being accidentally stabbed in shearing, by getting smothered in the yards, and by other mishaps.

A flock of six hundred ewes should have as many as twelve or fourteen rams among them. The rams should be kept in the flock for at least six weeks, unless indeed more than the above number are put with the ewes, which will lessen the time required. After the rams are taken from the ewe flocks, they may be placed among the wethers until next season; but, if no dry flock be kept, the better way is to hire them for the occasion from some neighbour. The cost of hire is about ten shillings for each ram, which is preferable to buying them outright, and letting them constantly run with the ewes, in which case the lambing, instead of being over in a few weeks, will be a bother for the whole year round, and quite ruin the flock. Where this unprofitable game is pursued, or where more than one dropping is expected in the twelve months, the ewes are never in good condition, and are so weakened by constantly rearing lambs, that the increase is comparatively poor and feeble, and the wool much deteriorated, being neither firm nor strong in the staple, nor heavy in weight.

If the lambing be all over by the latter end of September, the lambs will be fit for weaning at the shearing time, which occurs in November, and which should be concluded by the end of the year, to prevent the wool getting full of grass, seeds and burrs, which would damage its quality so much as to make a penny or more in the pound difference in its value.

After the sheep have been thoroughly washed, and sufficient time has elapsed for the yoke or grease to rise in the wool, the shearing commences. During the shearing season, many men travel to all parts of the country in quest of work as shearers, for which they obtain about fifteen shillings for the hundred sheep. These men are employed, for the rest of the year, either in driving bullocks, or as reapers, farm labourers, shepherds, or in any other calling they like; many are employed in the whale fisheries, the season for which closes just before the shearing commences, and hence these men can go from one occupation to the other without loss of time. Many shearers earn a good deal of money; thus a tolerable hand will shear sixty or seventy sheep in the day, and the best or the fastest hands will shear their hundred without much fatigue. During the shearing and washing, either spirits or wine is generally allowed, though not so often as formerly. The men are better without it, and I have remarked that those who were standing up to their chests in water for hours, washing sheep, could better support the fatigue, when supplied with hot coffee, than others who had access to intoxicating drinks. The more common allowance at present is a bottle of Cape wine *per diem*, with provisions also, but one shilling a day is deducted from the wages to pay for the latter. The sheep are shorn in great barns or wool sheds. One part of these buildings, which are often seventy or eighty feet long, is boarded and made ready for the shearers; close to this shearing floor, one or more tables are fixed up; these, instead of being solid, are

made like Venetian blinds, so as to allow any dust or dirt to fall through them from the fleece; at each of these tables one man is employed folding the fleeces as they are taken off the sheep, and putting them into different bales according to their quality. This person is the "winder," whose duty it is to take the fleece and spread it out upon the table, separate from it any stained wool or dirt, then roll it up from the tail to the head; and either tie the roll with twine, or with a band made by the neck part being twisted like a rope. Close to the door, the sheep are collected in a fold, and from that are driven into smaller pens where they can be easily caught, and which are laid down with clean straw or rushes to keep the wool dry, and as free from dust as possible. The men assemble at daylight, and when all is ready, and every one at his post, the catcher goes into the small pen, takes the first sheep he comes to, and delivers it over to the shearer next to him, and so continues till all the shearers are served. In a few minutes these sheep are turned out shorn into another fold, and the fleece is picked up, and placed on the table for the winder. If the flock be diseased, as soon as the sheep have been shorn the whole of them are dressed with a lotion; this again employs several men, and requires great care. When first caught in the dressing pen, the sheep are placed on the rump, and then the under part of the neck, and the chest, legs and stomach are well examined, and if any discoloration of the skin, or small vesicle denoting the scab, be observed, that part is opened or scarified with a sharp knife, and then well rubbed with the dressing;

the sheep is then turned up upon its legs, and the neck placed in a balè or stock made to fit it, which is confined by a wooden peg, so that there is no fear of escape; while here, the shoulders, back, rump and sides are well looked to, and, if the sheep are not dipped in a large tub containing the liquor, the wool is separated from the head to the tail along the spine, and the liquor poured into this furrow formed by the wool. Rubbing the sides will then soak the whole carcase; but the better way is, to take hold of the legs, lift the sheep into a tub full of dressing, only keeping out the head, so that no part can escape a thorough soaking. By this means the dressing and shearing will be over the same day, and the lambs can be separated from the ewes and weaned, after which a quiet station may be looked for until the next season.

The shearing is always a time of bustle and anxiety to the master, and of jollification for the men. After the wool is off the sheep and packed, the bales, being marked, are ready for the market, and are either sent up in the owners' drays, or drays are hired to do the cartage, and to bring back provisions; which latter should be obtained in sufficient quantities to last for twelve months, and may be brought down at but little extra cost by the return drays.

The merchants in Adelaide either advance money on wool sent to their agents in England, or buy the wool outright for their own benefit. Wool in town is therefore as good as cash, there being always plenty of buyers, and the farmer can easily find out the highest current price.

The wages for the shepherds are generally from 25*l.* to 35*l.* per annum, and rations; which latter consist of ten pounds of flour, ten pounds of meat, a quarter of a pound of tea, and two pounds of sugar; any thing else is paid for by the men out of their wages. The hut-keeper receives from 18*l.* to 20*l.* a year, and the same rations as the shepherd.

The shepherd takes his sheep out at daylight, and returns with them at sunset, when they are given over to the hut-keeper, to be put into a clean and roomy fold, and kept safe from the wild dogs, until given again into the shepherd's charge in the morning. The shepherd is expected to catch and dress any diseased sheep; to be answerable for the whole flock; and to report deaths or accidents at head-quarters. The rations are given out every week, and left in charge of the hut-keeper, who is liable to the shepherd for them, and for whom he cooks, keeps the hut in order, and helps as required. The shepherds and hut-keepers generally sign a written agreement, engaging to serve a certain time for a certain sum of money, be answerable for any property placed under their care, and make up any losses that may occur through carelessness or neglect. In these agreements the master ought, for his own sake, to be careful that the time of servitude of his men does not expire during the lambing, weaning, shearing, or dressing seasons; in which case he might find great difficulty in replacing his hands, the wages being then high, and work very plentiful.

Different accounts of the increase of sheep have at various times been presented to the readers of

colonial books; and if calculations on paper, in which death and accidents are not allowed for, were valid in fact, few of the Australian sheep farmers should be without large fortunes. The way of reckoning is somewhat in this style:—

	Increase.	Male.	Female.
600 ewes, first purchase,	1st year, 550 lambs;	250	300
900 ewes . . .	2nd „ 850 „	400	450
1350 ewes . . .	3rd „ 1200 „	500	700

This is little better than simple multiplication, and, if the expenses were even taken at the proper sum, the profit would meet them at this progressive rate. But sheep require great care, and, even with that, they will contract disease and die; be killed by the wild dogs; and suffer many other mishaps about which people in England hear nothing. From the time that sheep are first purchased, until either they are given up, or the owner has become callous, they are one continued source of annoyance. You cannot leave the stations for even a few days without hearing on your return that So-and-So has lost part of your flock, or that the sheep at such an out station have been attacked by the wild dogs; or that some other confounded event has befallen them. You spend large sums about dressing them, and gloat over the idea that you have killed the disease, which all the time is only awaiting a few rainy days to break out afresh. Perhaps your flock is clean, and then you are indeed lucky; but your pleasure will be modified before long by a few of your sheep being lost, and found in a neighbour's scabby flock; or worse, it

will be *vice versâ*, and his brutes will be seen rubbing their diseased sides amongst your clean animals. It is no use getting into a rage; you must bear all, and more sometimes. After all your sheep have been washed, and are ready to shear, a wild dog may likely come (these beasts seem to love to *annoy*, and *do* choose such a time) and break into the fold; the sheep then break out, and you are lucky if you find many of them again. These things make a sad hole in your calculations, and after the year is out you are fortunate if you are not out of pocket. True it is, then, that in the colony persons may lose hundreds, and even thousands of pounds on sheep. In my experience, as many as two hundred sheep died out of a flock of eight hundred in one night; and, in less than a fortnight, not more than three hundred remained; even these were afterwards much thinned, and probably now not more than one hundred of them survive. All this destruction was caused by that horrid disease the scab, in conjunction with the dressing applied to cure it. These great losses are not even uncommon enough to cause notice to be taken of them by the neighbours, who are often in the same plight with their flocks.

The best remedy for the scab, or at least the remedy most popular among the sheep farmers, consists of half a pound of tobacco boiled in a gallon of water for about three or four hours, and when cold strained; then add to the decoction an ounce and a half of corrosive sublimate, two ounces of turpentine, and one ounce of spirits of tar. This quantity should dress about twelve sheep, or more if they are not

very bad; for then it only requires to be applied to the places affected, and not over the whole body. Where the disease exists, the skin is very hard and thick, and of a yellow tinge. This skin should be scored through in stripes, and the mixture well rubbed in; which, although a barbarous operation apparently, the sheep seem to prefer to the dreadful torture they endure from the constant irritation. If carefully performed, and if the patients are afterwards occasionally looked to, this remedy is found to have the effect of killing the disease. Many other means and receipts have been tried with greater or less benefit, but the tobacco and corrosive sublimate is the favourite cure among the farmers. Sometimes, as before stated, great numbers of sheep are destroyed by the remedy, which is generally the case when heavy rain comes on directly after the patients have been dressed, which causes them to be attacked with dysentery, and they are soon carried off. The sheep are never housed at night as in England; it is not considered necessary, the nights being usually so mild that the people can sleep out of doors with impunity all the summer; and at other times, when the cold is more felt, the slightest shelter is all they seem to require.

The first year of sheep farming is sure not to bring any great return, even though you have more than common luck, but the third or fourth year will be more likely to give you a proper idea of the profit, and also of the loss.

That some approximation may be formed of the first expenses of keeping sheep, and of the profit for the first year, supposing the whole of the increase to

be sold, I shall imagine that the sum of 500*l.* is to be appropriated, and is expended on sheep to the best advantage. So far then as my experience has gone, I should dispose of it thus:—

	£	*s.*	*d.*
600 clean, well-bred ewes, from 2 to 4 tooth, at 10*s.* each, and in lamb	300	0	0
50 wedders for the use of the station	25	0	0
Hut for the shepherd and 100 hurdles	10	0	0
Shepherd, 30*l.* a year; hut-keeper, 20*l.*	50	0	0
Rations for both	15	0	0
Watch-box and cooking utensils	3	5	0
Labour and drugs for diseased sheep	6	0	0
Shearing and washing sheep and lambs	9	10	0
Wool bags, cartage of wool, and provisions	8	0	0
Loss of ewes by death (20)	10	0	0
Rations, clothes, &c., for sheep farmer	50	0	0
	£486	15	0

Thus very little less than 500*l.* is required to commence with good clean sheep, and these at a rather low price; and even then without a run for them, which, with the time lost in seeking it, may cost 5*l.*, and the squatting license 10*l.* more. This brings up the sum to nearly the 500*l.* Now, let us see the profits at the same standard of prices as before. After weaning and shearing, they will run as follows, supposing a good lambing:—

	£	*s.*	*d.*
550 lambs at 4*s.* each	110	0	0
580 ewes' fleeces at 3*s.* each	87	0	0
550 lambs' fleeces, at 1*s.* 6*d.* each	41	0	0
	£238	0	0

The profit will be greater if the lambs are not sold until they have reached a better age, as at nine months old they will fetch 8*s*. each. The calculation on the 500*l*. after a year's labour and anxiety, will, after paying the expenses, leave about 40*l*. surplus as profit; and, if the increase be not sold, the owner will for that year be at his wits' end to manage without mortgaging his property. For farming 600 sheep properly, 1000*l*. is required. With this sum there will be always in hand a few pounds to expend upon them if necessary. If the sheep are kept clean, and properly tended by the shepherds, the shearing is proportionably remunerative; the wool is longer and more plentiful, and altogether in better condition; but if they are diseased, the dressing applied to the fleece renders the wool hard and crisp, and materially diminishes its strength. This makes it less valuable in the market, and the quantity smaller. In lambing, also, very much depends upon the health of the flock; for a scabby lot the average will not often exceed 75, and will sometimes be as low as 30, per cent.; but for good clean sheep it may be as high as 95. Nothing is more material for the prosperity of the flock than a good shepherd, the want of whom will be particularly felt during lambing time, when the flock requires the greatest care and attention, and no inconsiderable share of good temper. It is customary to offer a reward to the shepherd who rears the greatest per centage of lambs, and the emulation this excites has many beneficial results. Some masters give one shilling a head for every lamb above 80 to the 100 ewes, and, if the shepherds are careful and fortunate,

some of them realise a good round sum in this way. In one instance I saw 114 lambs to 100 ewes, but many of these were reared by hand.

The chief care in purchasing sheep will therefore be, to obtain them free from disease, especially scab and foot rot, which two complaints are in themselves sufficient to ruin any new beginner; and when once they appear, if they are not attended to, will consume no end of money and labour, and the increase will be born diseased and stunted. The scab is a very contagious disease, not only infecting the young lambs, but, even when not fatal, destroying the crop of wool to such an extent that many sheep, before shearing season arrives, are almost as destitute of wool as the shears themselves. I have seen them perfectly bald, and the skin in parts, as the shoulders, back, &c., as thick and hard as sole leather. The scab occasions great irritation, and the sheep, if they cannot find trees to rub against, will tear their fleeces off with their teeth, the pain being so great. This disease is very prevalent, and therefore the purchaser should be particular, and ascertain the condition of any sheep before he buys them; if they have the scab, they are cheap to the new farmer at no price, and will never be good for either lambs or wool.

The foot rot among sheep is generally confined to wet and rank soils, and is seldom found upon stony hilly ground, which description of run should therefore be preferred. It is not so prevalent as the scab, though, when it makes its appearance, it is very expensive and difficult to get rid of. I have seen at least the third of a large flock that could not stand

upon their fore legs to feed, but were obliged to kneel upon their knees, which, with the constant friction, had become almost worn down to the bone; it would have been a charity to have killed them all, and very little loss eventually to the owner. The best remedy that I know of for the foot rot is, to remove the flock to high dry ground, where the land is hard and stony, which, with well dressing the feet, will soon get rid of the disease. The dressing I use is very simple, consisting of treacle and sulphate of copper, in the proportion of one part of the latter to four of the former: after well washing the part affected, this application may be laid on, spread upon cloth. Some dig a small trench at the entrance of the fold, and fill it with quick lime, so that, when the sheep are driven into the yard, they are obliged to tread in it. This is a good remedy if the sheep are in dry yards during the rest of the night.

Great carelessness is often manifested in getting up the wool for the market, although it is an article requiring the utmost attention to ensure a good price. Wools for the last three years commanded very fair profits, and on this account growers and shippers became careless, and the bales sent to London in 1846 were many of them in a bad state.

A large proportion of the Australian wools generally passes through the hands of the firm of Simes, whose report is always valuable, and gives good advice where it is required. I should hope that their experience will be attended to by the wool-growers. In their report for 1846 is the following:—"It cannot fail to afford gratification and encouragement to

the Australian wool-growers, to learn that the produce of their flocks is at this time in very high and deserved repute in England. This reputation arises chiefly from the peculiar softness of the cloth and other fabrics made from their wools, and it is therefore very desirable that the growers should exert themselves to combine the highest possible degree of firmness with this softness of handle; making it a rule to breed from rams of the finest wool and purest race they can obtain, purity of blood being a great essential towards producing wool of that uniform firmness of fibre, elasticity, and closeness of staple, which alone can enable the manufacturer to make a cloth small on the face as well as soft to the touch. The Tasmanian flocks, although not so long in a course of improvement as those of Australia, are now rapidly advancing in quality, and extensive further improvement may confidently be expected to result from a perseverance in the same system which has been so eminently successful in the best flocks of the sister colony as well as in Germany, the great point, as before stated, being the attainment of purity of blood. Indeed, several of the Tasmanian growers, by their skilful and assiduous management, have so much improved their flocks in quality, length of staple, washing and assorting, that they have materially raised them in the opinion of the buyers, who have testified their approbation by the increased prices they readily pay for the flocks in question."

This is an important subject to all who think of sheep farming, and I strongly advise them to obtain every information in their power before leaving Eng-

land, which can readily be done by applying to the wool brokers connected with the colony, on arriving whither, such information will be found most valuable. Different modes of cleaning the wool are in vogue; such as washing in tubs filled with warm water, and using soap, which is afterwards rinsed out by letting a stream of water fall on the sheep from an elevation of five or six feet. This is a good method to cleanse the wool from dust and dirt; it is expensive, but I believe pays, from the wool being so much cleaner than when washed in the common way. This latter consists in making pens in either a running creek or water-hole; then the men stand up to their middles in the water, and receive the sheep that have been soaked by swimming about for some five minutes; they are then passed from man to man, and each hand rubs them well, and rinses out the dirt from the fleece: they are at last allowed to swim to land at some convenient place, on a gravelly spot, selected to keep them clean. Some sheep again are shorn in the grease or dirt, without any washing beforehand, and the wool is washed in running water, and dried upon hurdles raised from the ground to allow a current of air to penetrate underneath. Others do not wash the wool, but sell it in its natural state; but then, as the weight is greater, and the wool must be washed eventually, the price is small; and it is generally considered a slovenly way of going to work by every farmer who has any emulation in his business.

Great attention should undoubtedly be paid to the

cleaning, in whatever way it may be performed: the careful man will not only obtain a better price for good washed and made-up wool, but also will find less trouble in making an advantageous bargain with the merchants, who know that his "clip" of the preceding year had been properly attended to.

Sheep, besides being valuable for their wool, are capable of being made very fat, if proper care be taken of them while feeding. They never gain flesh, however, if they are driven about from place to place, and *rushed* or worried by the shepherds' dogs, as is too often the case. This is easily seen, for if, after three or four months of proper feeding, they are carelessly used by a new shepherd, they soon lose the flesh and plumpness they had acquired, and are like so many skeletons; and also become diseased. This is a curious fact, but it is far too often proved. Be careful with sheep, and they may be a profit; be careless, and drive them about with the dogs, and they are sure to be a loss. Some sheep in South Australia attain what would be a very fair size in England, averaging 100 lbs. each, although fed entirely on the grass and herbage that they pick up upon their run. Mr. Gilbert, to the north of Adelaide, is famous for his fat sheep, and can at all times command a good price. One of his shepherds told me that he had had sheep in the flock that actually died from obesity. Of this fact I cannot speak positively; all I know is, that when dead, and in the butchers' shops, Mr. Gilbert's sheep attract great attention from their beauty. This gentleman, whose

estate is on the Barossa Range, always pays his shepherds a high price, because he gets the best men, and finds that this is good policy.

The country to the north of Adelaide is considered much the best for sheep-farming, both from its vast extent and also from the nature of the soil. To the south as well as the east of Adelaide the country is generally hilly and broken; but this is not the case to the north, where there are immense plains and valleys only slightly wooded, and with chains of water-holes in all directions. The water of these holes in most places is brackish; but it is found to be nourishing and wholesome for sheep and cattle, both of which fatten well with it. On first tasting, this hard water is any thing but agreeable; but the dislike to it soon wears off, and I am told, by those who have been accustomed to it, that the pure fresh water is afterwards considered insipid. Several gentlemen have declared to me that the brackish water was, to their palates, very pleasant, and I knew one person, in particular, who, when he received a glass of good water, would put salt into it to give it a flavour. At first this water frequently produces dysentery, but this speedily passes off, and I do not remember hearing of any serious consequences from its use. In some parts of the north, springs of fresh water are found; but these are few and far between, and cannot be considered a feature of that part of the country. Much has been said of scarcity of water over the whole of this colony, but without justice; for although South Australia can boast of no navigable

rivers, and of hardly any permanent streams, yet the surface water from springs is abundant, the supply of which never fails; and such collections of surface water are very equally scattered over all the known available land. I am not aware of a single plot of ground large enough for a sheep or cattle run that is rendered useless by the want of water.

For the purpose of procuring runs for sheep or cattle, the best way is to take out a squatting licence, which costs 5*l.*; for which sum a block of land, two miles square, is allowed: and the only difficulty is, that instead of paying the money for and claiming a tract of land found by the Government, you have to find the spot yourself, and, giving a description of it, claim the whole of the land within such and such boundaries. When this is done, and the money has been paid, the tract of land will belong to you so long as it may remain unsurveyed and unpurchased; but, when once put up to auction, the person possessing the run has no greater right to bid, and no more privilege, than any other individual.

The owner of an 80-acre section, in the district in which the run is claimed, can take the tract of land without the above payment, as for every 80-acre section a run is allowed on payment of 10*s.* only, if such run can be found by the party purchasing that section. This is a privilege allowed to the owners of land over those who are not proprietors.

On a run of the above extent, two flocks of sheep, each containing about 600 head, can be fed if the

grass is good; and this will keep the sheep for at least a couple of years, after which the increase will require increased pasturage; when the sheep-farmer must strike out an off-station, and divide the flocks between the two places. The ewe flocks should never contain more than 600, but the dry or wedder flocks may often, at least in an open country, amount to 1000 without any inconvenience accruing from the largeness of the number. These are looked after by only one man, who, if a good shepherd, will be quite adequate for such a charge. One acre of land is only reckoned sufficient to feed one sheep during the whole year; which is a correct calculation, for the great heat parches the feed, and the sheep destroy a quantity of pasturage by trampling over it. This is particularly the case around the folding ground, which soon becomes quite bare of herbage; on which account it is the best plan to form the station upon any indifferent poor land close to the feeding ground, and there to fold the sheep, thus saving the better land which is usually used for this purpose.

As for cattle, an 80-acre section is only reckoned to feed 16, which seems to be a short allowance to us in England, who hear of keeping a cow and pig, and supplying a cottager with vegetables, from a single acre; however, the above statement is true, and will continue to hold good so long as the land is allowed only to bear the natural grasses, and the cattle roam whither they will.

It never answers the purpose of the grazier to rent land of private parties for the purpose of depasturing

stock upon it; this should not for a moment be thought of whilst any runs can be obtained upon the Government lands.

The laws of the waste lands are as follows:—The Governor appoints a commissioner to make regulations. The commissioner is to adjust all differences between individuals respecting the occupation of their respective stations, &c. He may remove from one place to another the cattle, sheep, and servants of any licensed person found encroaching on the run of another. Persons resisting are liable to a penalty of not less than 20*l.*, nor more than 100*l.* Any one wishing to depasture stock on waste lands, or to occupy the same, by residing or erecting any hut or building thereon, or by clearing, inclosing, &c.; or to cut, saw, split or remove timber or other natural produce from any part thereof, must obtain a licence from the Governor or such proper officer as he may appoint. The penalty for neglecting to take out a licence is, for the first offence, not exceeding 10*l.*, for the second ditto, not exceeding 20*l.*, for the third or any subsequent offence, not exceeding 50*l.* Persons occupying waste lands may cut down timber for their own use on the station, unless public notice has been previously given by the Governor, or he has reserved the same for public uses.

Depasturing Licences, authorizing only the depasturing of stock; fee, 10*s.* 6*d.*

Occupation Licences, authorizing building and residing on waste lands, for the purpose of depasturing thereon; fee, 5*l.*

Timber Licences, authorizing only the cutting,

sawing, splitting and removing of timber or other natural produce therefrom; fee, 1*l.*

Occupiers of not less than 80 acres of purchased land, possessing a depasturing licence, may receive an occupation licence without payment of any additional fee. Persons holding a licence, who may violate any of the regulations, are liable to have their licences cancelled, and must quit their runs within ten days after notice.

All unsurveyed land, occupied or depastured under the authority of a licence, will at any time be liable to be sold or let in the same manner as other unalienate crown lands; but, in case of any such sale or letting being contemplated, the Government will give one month's notice to the holder of such licence. All surveyed land will, of course, as at present, be open to immediate sale or letting under existing regulations.

Forms of application for licences can be obtained at the office of the Commissioner of Crown Lands, or at the different police stations in the interior.

Any person licensed to depasture stock on the waste lands, who may consider that he has just cause of complaint against another licensed person, in any thing relating to the depasturing of stock, shall, at least ten days previously to referring his complaint to the Commissioner of Crown Lands for decision, cause a notice of such complaint to be served on the other party; and if, after the expiration of ten days, the party on whom such notice is served shall fail to remove the alleged cause of complaint, the complainant may then refer the matter to the decision of the Commissioner of Crown Lands.

In addition to money for licences, a tax is paid on the stock in this proportion :—

	s.	d.
For every horse or mare	2	6
For every head of cattle	0	6
For each sheep	0	1

Part of this sum was appropriated as salary for the inspector of runs, and also for the inspector of sheep, whose duty it was to endeavour to put a stop to the scab in sheep by making owners of diseased sheep pay a penalty if they neglected their flocks. This was found not to answer, and was discontinued.

The comparative return of the number of stock assessed for the years 1844 and 1845 :—

Years.	Horses above the age of six months.	Horned cattle above the age of six months.	Sheep, including weaned lambs.
1844	902	22,711	355,689
1845	1044	26,146	480,669

Comparative return of the quantity of land under cultivation in the years 1844 and 1845 :—

	Acres under cultivation.	
Crops.	1844.	1845.
Wheat	18,980	18,838
Barley	4,264¼	4,342½
Oats	1,045	1,485¾
Maize	241½	86¼
Potatoes	397¼	459
Garden	761	634
Self-sown.		
Wheat	888½	249
Barley	170	56
Oats	160	71

The apparent deficiency in the quantity of land, returned as self-sown in 1845, may be accounted for by the fact of the returns for that year not having been collected till the commencement of the harvest season, at which time many of the self-sown crops may have been already cut for hay.—*Compiled from Records in the Colonial Secretary's Office.*

CHAPTER VII.

FIRST INTRODUCTION OF CATTLE INTO ADELAIDE. — KANGAROO FLESH.—BREAKING IN STEERS FOR DRAUGHT.—JOURNEY OVERLAND.—HOSTILE NATIVES.—RAYE'S JOURNEY.—THE BUSHMAN'S FOOD.—PRICE OF CATTLE IN NEW SOUTH WALES.

When the colony of South Australia was first becoming inhabited by the white people, the want of oxen for draught was severely felt, and the few persons who possessed any were in a fair way of making a fortune by letting them out; so great was the demand, that a couple of oxen readily fetched 5*l.* a day, or 30*l.* a week, for their labour; and the poor creatures were likely to have been soon knocked up with work, being too valuable to have much holiday time, if fresh supplies of cattle had not been brought to the place. A pair of good draught oxen to purchase were at that time worth 200*l.*, but now 12*l.* is a fair price for a couple of strong animals well broken in to work.

The first cattle were, I believe, a few brought from the Cape of Good Hope; these were large, but slow at work; to the butcher, however, their weight made amends for all other defects.

The next supplies were from Van Diemen's land;

these fetched a high price, and were soon followed by more, as the cattle-owners in New South Wales heard of the enormous prices to be obtained in Adelaide; and a few enterprising gentlemen determined to collect their herds, and drive them overland, a distance of about 800 miles. This was a great undertaking, and one that required no ordinary perseverance and courage to attempt, for the main part of the distance lay over a country which was not previously known, except that there was the certainty of meeting with numbers of savage and hostile tribes of blacks, who might be naturally expected to wish to retain such plentiful provisions as the cattle would furnish; and in whose eyes the articles in the drays would doubtless seem handy and highly desirable. Captain Sturt had been down the Murray River from New South Wales to Encounter Bay in South Australia, so that the direction was not altogether unknown; but as his party were in boats, and in most places the river is confined by steep banks, little could be seen of the surrounding country, except in some parts, where for a few miles there were glimpses of what any traveller would consider a very dreary region. Not cast down by the thought of these perils, it was determined to attempt the passage; and for that purpose the cattle and horses were collected, drays and provisions were bought, and a party of men was engaged to drive and protect the cattle from the many dangers they were likely to encounter on the unusual journey. In a short time the expedition was ready to start in its adventurous course, where it was well known that no assistance

could be expected from friends, however much it might be required; and where the only human beings that were encountered would be too happy to murder and rob the party if in convenient distress and difficulties. All these dangers were, however, overcome, and, after a weary and toilsome march, the adventurers arrived at their destination, to their own profit and satisfaction, and the great joy and wonder of the Adelaidians, who hitherto had but little idea of such lengthened journeys, and now saw some prospect of enjoying meals of fresh beef and mutton, instead of the flesh of the kangaroo or emu, or the salt pork, to which they had long been accustomed.

Apropos of this subject, I may observe that the kangaroo and emu were for a long time the favourite food of the early settlers, and are now considered in something of the same light as game in England. The flesh of the kangaroo has much the taste of hare, and, when properly cooked, will be admired by those who are fond of the hare flavour. Kangaroos were at first plentiful, and it was no uncommon sight to see them bounding along through the midst of the embryo city of Adelaide; but the busy life and occupations of the emigrant have scared them away from their favourite resorts, and those which have escaped the gun, or the dogs, have fled to distant secluded parts, where they are rarely seen; and, indeed, so few are now caught, that the flesh is dear, and reckoned quite a luxury. The dogs kept to hunt these animals were originally brought overland, and are a breed between the greyhound and lurcher, combining both fleetness and

keen scent, with a large size and strength. For a continuance, the flesh of the kangaroo is any thing but pleasant, and the reader may guess the pleasure which the Adelaide gentry manifested, when they saw a large herd of cattle, and flock of sheep, come almost unexpectedly amongst them, and remind them thus practically of the roast beef of old England.

Advantage is often taken of the overland journeys to break in the young steers for draught, which not only makes the work easier for the old bullocks, but renders the newly broken steers more valuable. On first yoking they have for a partner an old, steady, and strong ox; one that they cannot play pranks with, and that is able to pull them to the right or left as ordered by the driver. By this means, and with judicious treatment, they are soon made to work easily and properly, and allow themselves to be handled, and yoked, or unyoked, without trouble. Some drivers, on first yoking, put strong tackle upon them, and then turn them out for two or three days, until they either get accustomed to their harness, or break their necks—one is about as likely as the other; for, when first confined in pairs, they are more like mad brutes than demure animals; although their ebullitions soon work off, (if, as I before said, the creatures do not kill themselves,) after which they become steady, and may be depended upon. Among the domestic animals I will back the bullock for cunning, stupidity, and inattention to what is said to him, as well as for strong determination to go his own way; all which has to be eradicated from his mind

and inclinations; and severe work he undergoes before he has properly learned his duty; but when once broken in, and well treated, he is docile and obedient, and appears perfectly to understand his place. Each bullock in a team is honoured by a name, to which he readily answers by obeying the orders of the driver.

The speculation of driving the cattle overland was found very profitable to all concerned. Some little account of the preparations for, and the difficulties of, the affair may be amusing. A party of about twelve men, all used to bush travelling, being formed, and provided with horses to ride upon, and drays to carry their provisions, the expedition is ready to start on the road, and drive the cattle before them, until they arrive at the boundary of the settled parts, where they recruit, to enable the cattle to get into good condition to continue their further travels by land and water, over stream and plain.

Beside provisions the drays would be loaded with all kinds of miscellaneous articles, and also with casks for water, and one of the drays should have the body made into the shape of a punt or flat-bottomed boat, to be used crossing rivers, which, without something of the kind, would both prove dangerous and cause much delay.

In some parts, for great distances, water is carried in the casks to supply the party for three or four days at a time, for they have to travel over barren, sandy and dry plains, almost without pasture.

The natives on the overland route were known to be hostile, and for the protection of the parties am-

munition and guns were provided. This has always been found necessary by every party, and indeed some, by not taking proper precautions, have had men killed, and all the cattle and other property scattered amongst the aborigines. The object of the blacks in attacking a party is to obtain possession of the live stock, which they kill and eat, and for which they will often expose their lives, although never in open fight if they can avoid it. On this account parties travelling with cattle or sheep, whenever they found any of the animals speared so as to be unfit to travel, or killed by the blacks, always made it a rule to burn the carcasses; or at least any part of them that they did not require for the use of the expedition; thus showing the natives that they would not obtain their object by maraudings; and, if the same thing could invariably be done, I think the destruction of property by the blacks would soon cease, since they could have no object in taking the lives of the cattle. When on the march, two or three of the party ride ahead, to see that there is no obstacle in the direct path, and, in case any deviation is requisite, to direct the driver of the cattle and drays.

This advanced party keeps at a certain distance in sight of the rest, and is followed by the cattle, which are driven by three or four more men (according to the strength of the party) leisurely along, and these in their turn are followed by the drays which carry the provisions, &c. Every man has a gun and generally a pistol ready loaded, and, in case of the natives being seen hovering about, the leading men and the

cattle-drivers fall back to the drays, ready to act on the defensive.

The drays form a shelter for the party, for the blacks always endeavour to make the attack on them in the plains whilst they themselves are protected by the trees growing at the edges of the open spaces, from behind which they peep, to get an opportunity of throwing their spears. With this weapon they are very expert, and can project it to a great distance, often killing birds and animals eighty yards off. The blacks never collect together to face the white people on the plains, if they can in any way avoid it, but, if there be no trees of sufficient size, seek shelter in the scrub, underbrush, or beds of reeds, which are common on the banks of the Murray River, and grow to a great height. This river lies in the route we are speaking of, and flows with serpentine windings for a great distance. Its course is followed down by the overland parties, and the bights or bends are generally selected as the securest places for putting the cattle into at night; as the deep water, which they will not attempt to swim in the dark, almost encompasses them, and the entrance to the little peninsula is occupied by the party.

The camp being so placed, the cattle, if attacked by the blacks, can only escape by rushing out and alarming the watchmen. At night, as also indeed by day, the cattle seem to be well aware of the approach of natives, and to know their danger, making desperate efforts to escape; and, often for years after, they never see blacks approach without making off at full speed. This also is the case with some sheep, which,

in fact, show as much aversion to the natives as to the wild dog, to which they have so well founded an antipathy.

When on the march, the cattle are flanked by the stock-keepers or drivers on horseback, whose business it is to keep them together, and advancing in the proper direction. This cattle-driving is very wearisome and tiring work. The men have to keep close to the beasts in the sandy, dry plains, and other places where the dust and heat are almost suffocating, from which, however, they must not attempt to escape, or they will have the whole herd in disorder. The drays are frequently driven over hilly, broken country, intersected by large and deep creeks, and almost every other natural obstacle, and yet the untiring perseverance of the men, and the strength of the oxen, surmount all these difficulties. I believe that hardly any other animal could bear the labour and privations that these cattle undergo. In some places the hills are almost perpendicular, and then the cattle must "cut" backwards and forwards, like a ship tacking; and in the descent it is not unfrequent for the drays to get the mastery, rush down, and break the necks of the poor creatures, notwithstanding that large drags, composed of trees, are placed behind the drays, and the wheel on one side is locked.

The present and best journey overland to Sydney is from Adelaide to Portland Bay, and thence through Port Philip; this route is becoming generally used. It is now common for people to walk from Portland Bay to Adelaide, and the rest of the distance to Sydney is well populated, a station being

met with every 10 or 15 miles along the road. Latterly a mail has run the whole distance, and the journey is performed by the horse police; this is a great accommodation to both settlements, ensuring quicker despatch, and greater safety, than by the trading craft that formerly carried the letters.

It was on the road from Adelaide to Portland Bay that the passengers and crew of the *Maria* were cast on shore, and every one of them massacred by the natives, for which crime two of the offenders were hanged. These natives have done many such deeds, and were nearly killing the crew of a vessel that was wrecked on their coast about two years ago; but there will be more traffic now, and the aborigines will, it is hoped, become as quiescent as the Adelaide tribes.

A short account of an overland journey has been published in an Adelaide paper, and, as it will give some idea of the dangers to be encountered, I may be pardoned for making use of it.

It appears that a report was in circulation that the party had all been destroyed, and the cattle lost; hence, their arrival caused great joy, and not the less because all the cattle were safe, except three horses. The account states that Mr. Raye (with eleven men and a boy under his command, and having in charge 1100 head of cattle, and twenty horses, with the requisite provision, drays and appendages, and a sheet-iron boat in addition to the ordinary overland equipment) started from Millerere for Adelaide on the 15th June, 1846, with the intention of keeping the Darling River all the way, until the party fell in with Captain Sturt's depôt at Laidley's Ponds, and with

the track which would indicate that experienced and gallant traveller's line of march. The station known as "Millerere" (at present one of the outposts of civilisation near the western frontier of New South Wales) is distant from Mohanna 170 miles; that place (situate 70 miles north-east from Fort Burke) being 300 miles distant from Laidley's Ponds, as measured by time and travel; and the latter locality a little more than 300 miles from the Darling's junction with the Murray.

Subsequently the adventurous band had to cross a country which seemed too wretched for the abode of human beings, and which was, in fact, uninhabited; the only feed for the cattle being contiguous to the bed of the river. From the general appearance of the land, it must be quite impassable after a heavy fall of rain, and seemed to afford no safe place of refuge, and no practicable outlet; nor, to the experienced eye, any hope of improving, at least in the direction of the north-west desert described by Captain Sturt. The rates of progress varied with the degrees of local difficulty, from 3 miles a day to 17; 8 miles was the average, the maximum speed described being of rare occurrence, and the smallest distance diurnally accomplished often the most difficult, requiring the utmost strength of ten bullocks in a dray to overcome the various and often recurring impediments. Frequently the condition of the surface seemed to vie with the worst features of the desert country, so graphically portrayed in the public despatches of Captain Sturt, or those portions of the remote interior described by Mr. Piessè, the

leader of the gallant Captain's relief party. Such were the appalling difficulties of the way, that four men at a time became sick and disabled, and, upon such occasions, Mr. Raye found it necessary to make a carriage body of the boat, that the sufferers might be relieved from the insupportable fatigue, and have a chance of rest and recovery through this mode of conveyance. The boat was upon other occasions found infinitely serviceable, by enabling some of the party to cross the river after cattle which had been dispersed, or driven over by the natives. On the 17th August, when about 100 miles north of Laidley's Ponds, Mount Murchison being in view, Mr. Raye was surrounded by about 270 blacks, whose *gins* or women, to the amount of a hundred or two, were aloof on the other side of the river, a sure sign of hostile intent. Mr. Raye's men became strongly impressed with the necessity of using their fire-arms, but he would not hear of it, but resolved to make an attempt to satisfy the clamour of the surrounding mob by sacrificing a bullock. Singling out, therefore, an old crippled beast, he shot it before their eyes, and, after the act of slaughtering was complete, delivered the skinned and disembowelled carcass to the expectant aborigines, and lent them an axe and sundry knives for the purposes of dissection and subdivision, with which they accomplished these processes cleverly enough. After this they returned him the implements, and then began to prepare for a "spread," which seemed to give the recipients great satisfaction, whilst the giver, happy to part with his troublesome guests, prepared for a long stage,

and accomplished nine miles during the day. These means of pacification (and what a great peace-maker a full belly is), coupled with the formidable appearance of Mr. Raye's party, saved the expedition, without firing a shot, from the destruction which it was in the power of so numerous a body of armed natives to have inflicted, had they been combined and determined.

From these and similar circumstances, and, above all, the impossibility of effecting a retreat in any emergency, owing to the difficult nature of the country, Mr. Raye would not again attempt the same route; but, on the contrary, would deter others from the like enterprise, as a most perilous one; and especially hazardous for any small ill-appointed and ill-conducted party. The cattle and horses of the expedition were frequently more or less dispersed; and upon such occasions the services of the docile native boy, who is of very light weight and an admirable rider, were as invaluable as astonishing, accomplishing that which would be almost impossible for a heavy man, in a country where the hoofs of a stockman's horse would alternately be clogged and encumbered with adhesive clay, or sunk half way up to the shoulders and haunches in the yielding soil or dangerous chasms. The natives would frequently surround the camp at nightfall, as if they contemplated an attack after dark; and upon one such occasion two horses, supposed to have been *rushed* by them, met with injuries, which rendered it necessary to despatch them. No actual attack on the camp was attempted, in consequence of the vigilance in-

variably maintained, six of the party being included in each watch. In the neighbourhood of Laidley's Ponds, the blacks are intelligent as well as numerous, and they intimated to Mr. Raye's people, by comprehensible words or signs, that white men had been there not long ago, and offered to show their former places of sojourn. The party found the locality of Captain Sturt's depôt, and especially a bough *gunga*, which had been the abode of some officers or men of his expedition, quite undisturbed; and Mr. Piessè's initials, L. P., were found upon several trees at different points near to, or on, this side of the depôt. At this period of the journey the natives were amicable, and would sometimes follow the expedition in a friendly way, keeping about 200 yards in the rear, and indulging in a variety of grotesque antics, and demonstrations of merriment or good-will. Once upon the well-defined track of Captain Sturt, the progress of Mr. Raye's party became regular, safe, and almost uninterrupted; and they ultimately reached our settled districts upon the Murray, with the cattle and horses in such good condition, as to warrant Mr. Raye's demanding the highest current prices.

This short account is interesting to such as wish to become acquainted with the mode of life on the overland expeditions. After the cattle have travelled the distance required per day, generally from 10 to 12 miles, and as they near the spot reported by the leaders as the best to camp at, they are allowed to feed, and the drays, having come up, are unloaded, the tents pitched, and preparations made by the cook for sup-

per. A large fire is made, close to some dead log, and the kettles for tea are put on to boil; meat is cut up, and fried, or otherwise cooked; and a good substantial meal is soon in readiness. The meal is always accompanied by the damper, a species of bread much in use in all the out stations, and which is thus prepared:—A quantity of flour is mixed with water until stiff, and is then well kneaded, and made into a mass about two or three inches in thickness, and eighteen inches or more in diameter. A large fire having been made on the ground, and burned out, the hot ashes are scraped to one side, and the bread is thrown in, and covered up with the ashes until baked, which takes about an hour and a half; it is then taken out, dusted with a cloth, and, if properly made, proves tolerably light and quite clean, and by many persons is much relished. It consists, as will be seen, of nothing but flour, salt, and water. Another method of making it is this: take some dough made as before, and flattening it on a sheet of bark cut from the trees, into cakes about the size and thickness of biscuits, put these on the fire to grill or toast, and keep turning them until done, when you will have a good and palatable damper.

The blacks in the settled parts are often employed as guides, and are found to be faithful, and thankful for any kindness. I have seldom heard of their taking advantage of their position to do harm to their masters. Some of the overland parties, however, have been badly conducted, and the men allowed either to annoy the blacks, and goad them to revenge, or to fire upon them at first sight, even when they were coming up in a friendly

and peaceable manner. Nay, I have heard many of these fellows boast of the number of blacks they have killed; but I have charitably suspected their innocence of any such acts of courage, especially in fair fight. However this may be, enough damage has been done to the blacks on the overland route, to make them remember it, and bitterly do they revenge themselves when they can.

But to return from this digression. At night large fires are made, to prevent the natives from approaching unseen, and some of the party watch the camp and cattle till the morning, the latter being allowed to feed until breakfast is over, and all the things packed up and on the drays, when the cavalcade is again set in motion.

Great difficulty is frequently experienced in making the cattle cross over the rivers met with on the journey, and often the party is much detained. In such cases the cattle are collected at any convenient place, the stockmen and dogs do all in their power to urge them to take the water, and after much excitement they perhaps succeed. First one ventures in, then a second, until the whole herd are following close to each other, and generally the head of one rests upon the other's back; and, if nothing oppose them, the work is over; but if the bank on the other side be steep, and the landing-place bad, they turn back, and then the leader coming round, and meeting the hindmost, will place his head on the back of the last, and they all swim round and round in a hollow ring, and, if not separated, would keep this up until all were drowned; a choice exhibition, in fact, of what we see so often in other things—a vicious circle. The men

have now to break the chain, and guide them over in the best way they can, which is a very dangerous task. I know a gentleman who nearly lost his life by one of the cattle making after him in the water; he was forced to swim from the enraged beast, which became so furious that it required to be shot directly.

On arriving near Adelaide, the cattle are halted, and huts built for the men, and they remain here until the former are in good condition, and ready for sale.

When cattle were first taken to Adelaide, they were worth 100*l.* each; now the price is about 6*l.*, and the same for cows, for which sum, however, they should be good. The cattle were to be bought in New South Wales about that time at 30*s.* a head, all the young under twelve months old being given in. Indeed, a few years since, the live stock there was so plentiful, that no sum, however small, could be obtained for them. The market was glutted, and trade in a bad state; and, even later, large quantities of cattle and sheep have been driven in to be killed, and boiled down solely for the fat and hide. The fat is worth 4*d.* per lb.; hence an ox weighing no more than 6 cwts. will be worth about 5*l.* for the fat alone, reckoning 2 cwts. 2 qrs. of fat for the whole carcass. The skin of cattle is worth 7*s.*, and will pay for the boiling; and with these two items the profit is considerable. This mode of disposing of cattle has been, and to the present time is, in active operation both in Sydney and Adelaide, and sometimes also large flocks of sheep are thus slaughtered. The only parts of the sheep not

yielding much fat are the hind legs, some of which are salted, and are to be procured fresh at 6*d.* each, generally less than 1*d.* per lb., and very fair meat. The above unceremonious mode of treating the cattle is sufficient to prove their great increase, and the little care required for them is shown by the fact, that they are continually wandering about, and calve without any notice being taken of it, except that at two or three months old the calves are got in for branding. Sheep, however, require much care, with which they multiply so quickly, that were it not for their diseases, and for the wild dogs, they would hardly be kept under.

A paper from Adelaide mentions that a herd of cattle, amounting to about 6000 head, was expected there every day; and also that a herd of 900 had just arrived, together with considerable flocks of sheep: the road must therefore be well beaten by this time, and indeed stations are springing up every few miles.

It is imagined by some that the sheep are infected with the scab from being over-heated with travelling on their long journeys, which is likely to be the case; and certainly, the better the shepherd, the less liable are the sheep to become diseased. Calves and lambs brought forth on the journey are generally destroyed, as they cannot keep up with the cattle, or, should they even do so, the exertion would make them of little value for the rest of their lives.

Cattle, if yarded for the first two or three weeks, become reconciled to the spot, and will not generally stray away; but, if not properly tended at first, they

are sure to make their way to some spot which they like, and have indeed been known to ramble the whole distance back to the Sydney District, on the way to which they have to swim some large rivers, and to pass through a great extent of desert land. I believe instances are known of cattle being brought over two or three times, and always after a time regaining their ancient feeding ground. Some are left behind footsore, and others manage to escape from the herd, and become quite wild; these breed fast, and there will in time be hundreds of wild cattle in different places along the road. In parts of New South Wales wild cattle abound from the same causes; also hundreds of wild horses, which are almost impossible to catch.

That there are plenty of runs suitable for farmers and their flocks there can be little doubt, if we only judge of the tract that was known a couple of years ago; but since that time the discoveries are great, and tracts of land have been traversed by adventurous explorers that would more than equal the whole country at present inhabited by the South Australian colonists. Around Port Lincoln some fine land has lately been found, and this at comparatively a short distance from Adelaide, if approached by water. The explorer in this case was Dr. Gemmel, in company with some friends, and they came across a vast extent of grazing country, before unknown to parties located in the district. It is situated about seven days' journey, or one hundred and fifty miles, towards the interior, on the route to Streaky Bay; and, from information from parties

who have since travelled farther over it, the prospects it holds out are very favourable. A quantity of land suitable for pasturage is at present unoccupied around Port Lincoln, and there would be little difficulty in obtaining runs in that part for small flocks. The large sheep proprietors must always require proportionably large tracts of country; some of them have their flocks feeding over from twenty to thirty square miles of good land; but whoever owns not more than two flocks, or from 1200 to 1400 sheep, only wants two square miles to feed them on; which may easily be had at no great distance from the settled districts. A large pastoral country was lately found at Rivoli Bay, whither many thousand sheep have already gone. This is situated about two hundred miles to the south-east of Adelaide. The South Australian Company alone sent 10,000 sheep to that part, and many of the large stock-owners followed their example; at present, I should say, not less than 100,000 are depastured, where, only two years and a half since, the country was perfectly unknown.

The manager of the South Australian Company, who went to Rivoli Bay with the flocks, returned to Adelaide after an absence of thirty-five days, during which time he had carefully examined a great part of the new country, the good land whereof extends about three hundred miles. He describes the uplands generally as thickly wooded, and the lowlands as flooded at certain seasons of the year. The lowlands, on this account, are not so valuable for pasturage, as sheep fed upon them are liable to be attacked by the foot-rot; but they may be used during

the summer months, and the flocks removed to higher ground before the wet season.

In this district an extinct volcano was observed, and named Mount Gambier. The craters, three in number, exhibit some interesting features; one of them is filled with water, and occupies about twenty acres in extent. A police-station has since been formed near this place, to preserve order amongst the settlers, keep the blacks in check, and form a station for the overland mail from Adelaide to Port Philip, which passes here on the road to Portland Bay. This new settlement boasts of a fair harbour at Guichen Bay, where wool and other produce may be shipped with little risk. A township has been formed, and thirty acres of land laid out for that purpose; and there is every appearance of its becoming a thriving place before long.

But other large tracts have been discovered in different parts. On the overland route to Port Lincoln a fine country exists, and also in other places within two hundred miles of Adelaide. Thus there will be little fear of want of pasturage, even without the splendid and extensive blocks of rich land lately discovered by Captain Sturt, Dr. Leichardt, and Sir Thomas Mitchell. These discoveries are immense, and there is no doubt that they will lead to others of the same kind, which will supply pasturage for centuries to come.

The minerals in Australia have made a great difference in the price of lands, especially in some districts where mines are found. In these places, after the land has been advertised, the ground is visited by

numbers of persons armed with hammers and pick-axes, who turn and break every stone they come against, in order to discover concealed treasures. If any metal be found, there is sure to be high bidding for the land at auction, which much injures the farmer, who only wants land for a station. This does not, however, apply to all parts, as the land sales show; and land, therefore, can be easily purchased if a section be not selected in the close neighbourhood of the mine. On the 22nd of December, 1846, 4065 acres were sold in blocks varying from twenty-seven to one hundred and fifty acres each, but generally eighty-acre sections. The whole quantity was disposed of by public auction for 4450*l.* 7*s.*, the average of the fifty-two lots being little more than 1*l.* per acre. The properties purchased were situate in various districts, from Crystal Brook, on the north, to and beyond Mount Gambier, in the south-east. This is mentioned to show that the average price of land is not high, except where it is known or advertised to contain minerals.

In case of any land not surveyed being selected, the intending purchaser must give notice to the Surveyor-General that he wishes to buy such or such a block, describing its locality, and the number of acres required. In this case it is measured as soon as a party of surveyors is going in that direction, and then it is advertised in the public papers for the space of three months, after which it is brought to the hammer, and sold to the highest bidder.

If the land be in an isolated situation, at a distance from other surveys, possibly some time may elapse

before a surveyor may come thither; for it does not answer the purpose of the Government, with the present staff, to send out in all directions, and measure small blocks of land wherever they may be pitched upon. Complaints, it is true, are sometimes made of the present plan; but it would be both expensive and injudicious to alter it.

In December 1846, the Lieutenant-Governor returned to Adelaide from a voyage to the head of Spencer's Gulf, undertaken for the purpose of examining some newly discovered harbours, and also a fine tract of land. Two of the harbours were not considered safe for shipping; these were Port Germain and Port Ferguson: but it was found that a portion of the gulf, immediately north of Point Lowly, contains a fine harbour, with a depth of from four to seven fathoms. The land close to the gulf at this part was passed over by Mr. Eyre in 1839, and, according to his report, it is favourable for land carriage. Mount Remarkable is in the immediate neighbourhood of this harbour, and the country round it is described as abounding in beautiful pasturage, and as possessing immense mineral wealth. The distance from Adelaide is about two hundred miles. This will in all probability prove to be an excellent district for sheep and cattle; a great quantity of land available for pasturage has been found at different times; and at last a good harbour is explored, whereby the expense of carting wool, provisions or other articles, to and from the stations, will be materially reduced. Finally, the splendid discoveries of Sir Thomas Mitchell will have the

effect of opening out the interior of Australia to enterprising settlers with flocks and herds.

I shall be excused for quoting what Sir Thomas Mitchell says in his despatches:—"On ascending the range early next morning," says he, "I saw open downs and plains with a line of river in the midst, the whole extending to the N.N.W. as far as the horizon. Following down the little stream from the valley in which I had passed the night, I soon reached the open country; and during ten successive days I pursued the course of that river, through the same sort of country, each day as far as my horse could carry me, and in the same direction, again approaching the Tropic of Capricorn. In some parts the river (Warrego) formed splendid reaches, as broad and important as the river Murray, in latitude 24° 14′ S., longitude 144° 34′ E.; in others it spread into four or five channels, some of them several miles apart; but the whole country is better watered than any other portion of Australia I have seen, by numerous tributaries arising in the downs. The soil consists of rich clay, and the hollows give birth to watercourses, in most of which water is abundant. I found at length that I might travel in any direction, and find water at hand without having to seek the river, except when I wished to ascertain its general course, and observe its character. The grass consists of panicum, and several new sorts, one of which springs green from the old stem. The plains were verdant; indeed the luxuriant pasturage surpassed in quality, as it did in extent, any thing of the kind I had ever seen. The

myall tree and salt bush (*Acacia pendula* and *Salsole*), so essential to a good run, are also there. New birds and new plants marked this out as an essentially different region from any I had previously explored; and, although I could not follow the river throughout its course at this advanced season, I was convinced that its estuary was in the Gulf of Carpentaria; at all events the country is open and well watered for a direct route thereto. That the river is the most important of Australia, increasing as it does by successive tributaries, and not a mere product of distant ranges, admits of no dispute; and the downs and plains of central Australia, through which it flows, seem sufficient to supply the whole world with animal food.

"The discovery of this river, and the country through which it flows, was the more gratifying to me, after having been disappointed in the course of so many others. The Cogoon, the Maranoa, the Warrego, the Salvator, the Claude, the Belyando, and the Nive are nevertheless important rivers, and a thorough investigation of the mountain ranges in which they originate will enable me, I trust, to lay before your Excellency such a map of those parts of Australia as may greatly facilitate the immediate and permanent occupation of the country, and the extension through it of a thoroughfare to the Gulf of Carpentaria, to which the direct way is thus laid open. With a deep sense of gratitude to the Almighty, and loyalty to my gracious sovereign, I named the river, watering the best portion of the largest island in the world, the 'Victoria,' and

hastened back to my party on the Salvator. I reached that camp on the 8th ultimo, having been absent about a month; found the cattle and horses refreshed, and in condition for pursuing our route homewards. In nine days we reached the depôt camp, where I left Mr. Kennedy with the heavy drays and cattle, and received the agreeable intelligence that, during the long period in which that party had been stationary, the natives had given no trouble; that the men were all well, and the old cattle in good condition. I had straightened the route in returning, so that it is now a most convenient road, well watered by permanent supplies.

" Mr. Kennedy's inquiries amongst the natives led to a very important discovery which we have since made, namely, that the Maranoa turns south about thirty miles below where he had his camp, and joins the Balonne only a day's journey above this spot whence I write. We have explored and surveyed the Maranoa downwards, thus avoiding, in travelling by it, parts of the old route where we feared that ponds formerly small would be now dried up. We have also discovered on the banks of this river much rich pastoral land, and, about latitude 26° 30′ S., open downs resembling on a smaller scale those on the Victoria; and whether the vast extent of intervening country may not admit of a direct passage across from these to the central downs, without crossing the Plutonic ranges, remains to be ascertained during a season when the water holes are better filled. Into that country the channels of the Warrego and Nive turned when I had to leave

them; much native smoke arose there; and I regret that I cannot now explore the course of these two rivers.

"The survey of the Maranoa forms a line permanently supplied with water and grass, from this camp to the farthest limits I have reached, and directly in prolongation of my road across the Hawkesbury and Hunter, intended originally to have been made to Liverpool Plains. One link only is still wanting to complete the chain; it is from this natural bridge on the Balonne to the furthest point reached by me in my journey of 1831, a distance of about seventy miles; and I hope to find the country in that direction passable for this party in its way homewards."

Such are some extracts from the despatches sent by Sir Thomas Mitchell to his Excellency the Governor of New South Wales, dated from the camp at the head of the river Salvator, in longitude 147° 25′ 40″ E., and latitude, 24° 50′ 17″ S., 9th September, 1846. The passages here inserted give, however, but an imperfect idea of the magnitude of the discoveries; but enough may be gleaned from them to show the splendid description of country passed over, and also a new feature in Australian discovery, the mighty and navigable rivers that have been partly explored. The Murray is certainly a fine river; but Mitchell describes his new discovery as far beyond it in grandeur, and having also an advantage in the immense tract of verdant plains through which it and its tributaries flow. There is now no doubt that this great river disembogues into the Gulf of Carpentaria, Sir Thomas Mitchell having succeeded in tracing it to that gulf. Cap.

tain Sturt, the South Australian discoverer, explored from longitude 138° almost to longitude 142° E., and from latitude 30° 40′ to latitude 24° 40′; in other words, through four degrees of longitude, and six degrees of latitude, being a much smaller area of land than that passed over by either Sir Thomas Mitchell or Dr. Leichardt; although his journey involved greater privations, and required more devotedness, than those of either of the other gentlemen; who were more fortunate in their direction.

Captain Sturt's trials were great indeed, and his discoveries at best of but a negative kind. Altogether, he had enough disappointment to subdue the stoutest heart; but the great experience and knowledge respecting that sterile region that he has acquired will be most useful and important to future explorers in the same direction. He was expected to make brilliant discoveries, and every one was anxious to hear how he fared in the wilderness; but even when news arrived of the barren inhospitable country he had seen—when nearly all hope of fine lands in the interior was dashed, the citizens were proud to receive the gallant captain once more among them, and to treat him like a conqueror rather than an unsuccessful explorer; and, from his perseverance and energy in all his difficulties, well did he deserve whatever honours they could shower upon him.

A word now respecting the course to be pursued by the emigrant in obtaining a run for any cattle, sheep, or horses that he may purchase. It will not answer his purpose to buy land to feed them on, if

he intends to make a living by them; the expense of the land will be more than the sheep or cattle that can feed upon it are worth; and, therefore, the settler must take a run on which to feed them without great expense, or he must buy food for them, or rent lands in the settled districts.

There are always plenty of runs to be procured for small flocks, if not close to the town, yet within a hundred miles of it. This distance is thought little of in the colony, where good and cheap horses abound, that will carry a rider the whole journey in a couple of days. If he be not inclined to a bush life, a steady shepherd to each flock, and a careful hut-keeper, will manage pretty well; but he must now and then look after them. Residence on the spot, however, is much better than trusting to the best servant that can be procured. It is an old and true saying, which I have already used once before, that "the master's eye makes the horse fat." If the sheep or cattle-owner is above his business, and entirely trusts to his servants, he will find little profit at the end of the year.

All persons with flocks of their own are jealous of new comers. The cause is, that as the latter have a run marked out for them, often adjoining some old run, the elder settler is cramped by being obliged to keep his flocks within his boundary, instead of having the whole country before him. When this is the case, and he is limited within particular boundaries, and his flocks increase, he has not the power to extend his runs without separating his stations, having one here, another 20 miles off, and so on; this is in-

convenient to him, and perhaps forces him to shift altogether. Some large tract of country is frequently being discovered, and to one of these he goes, with his overseer, or a friend. They take their horses, provisions and blankets, and are probably away a month looking out for runs, which, when they have found, must be claimed at the Survey Office, and a license taken out; after which the settler can take possession.

But little trouble is experienced in shifting a station; the effects to carry are small, consisting of provisions, bedding, clothes, and a few things required for the sheep or cattle. Hurdles are made at the new station, or else a brush yard is put up to answer in their stead. A single dray will take all the goods of the station; the shepherds feed their sheep along the road, or through the bush, to the new station; the dray follows, and, camping every night, the party in time reaches the fresh run. Here a hut has to be built, hurdles made, and a watch-box for the shepherd; a wool shed constructed before the shearing, and other little jobs of work completed, and then every thing goes on in the old way.

The expense of forming an extra cattle station need not exceed 30*l.*, inclusive of cartage, cooking utensils, making a hut, and putting up a stock-yard. The timber is cut down and appropriated for all kinds of building and other purposes, without any expense being incurred.

A sheep station costs about the same sum, which also purchases hurdles and watch-box, a strong hut, and all cooking utensils, with a large iron pot for

making tobacco decoction for the diseased sheep, and other articles that are required.

The following are the regulations at present in force in South Australia for the disposal of Crown lands:—

1. At least once in every quarter one public sale is to be held by auction.

2. Lands to be divided into three classes: town, suburban, and country lots.

3. Intended sales to be notified by proclamation.

4. Sales to be notified not earlier than three months, or later than one month, before day of sale.

5. Government to fix time of sale and size of allotments.

6. Application for land may be made in particular localities.

7. Regulating the manner in which land is to be brought forward for sale.

8. Deposit of 10 per cent. to be paid, and remainder in one month.

9. Condition of sale to be announced.

10. Country and special country lots, put up and not bid for, may be claimed without competition.

11. The same, after deposit has been forfeited.

12. Full price must in these cases at once be paid.

13. Form of application.

14. Money intended for payment of land will at any time be received.

15, 16. Certificates of payments given in London.

17. Land receipts transferable.

18. No regulation yet issued with regard to remissions to retired military and naval officers.

19. Priority of application determined by the sale.

20. Deeds to contain grant of every thing above and below the soil.

21. Government reserves coast line to 100 feet from high water mark.

22. No quit rent reserved.

23. Fees payable.

24. Persons may apply for 20,000 acres without competition, the price to be never less than 1*l.* per acre.

I have extracted these land regulations from a very clever and useful work on South Australia, of which Francis Dutton, Esq., is the author*. I strongly advise all intending emigrants to read it; and can assert, as far as my own experience serves me, that it is a most correct and authentic account of that colony. The part of it devoted to mines and mining is extremely valuable, particularly as coming from one who is, and has been, no inconsiderable owner of mineral lands from their first discovery to the present time. I have to acknowledge having received much pleasure in reading Mr. Dutton's book, and I also have availed myself of its excellent information in writing the present work.

* South Australia and its Mines, published by Boone, New Bond Street, 1846.

CHAPTER VIII.

CLIMATE.—RAIN GAUGE.—HOT WINDS.—METEOROLOGICAL OBSERVATIONS.—STORMS.—EARTHQUAKES.—DISEASES.—SEASONS.—GARDENERS' CALENDAR.—NATIVE TREES.—EUCALYPTUS TRIBE.—MANNA.—ACACIA TRIBE.—GUM ACACIA.—GUMMERS.—CASUARINA OR SHE OAK.—NATIVE CHERRY.—TEA TREE.—HONEYSUCKLE TREE.—SARSAPARILLA.—GERANIUMS.—THE HOP PLANT.—OLIVE.—INDIGO.—TOBACCO.—MULBERRY.

ALL writers on South Australia agree that the climate is equalled by few, and surpassed by none; and but rare instances are found in the colony of emigrants complaining of it. The atmosphere is so clear and elastic, and causes such buoyancy of spirits, that a greater degree of heat can there be borne than in higher latitudes, as England for instance, where the air is always more or less charged with moisture, in which case the heat produces a suffocating feeling that is never experienced in South Australia.

During the winter months (as they are called, but which name gives but an indifferent notion of this season, for there is neither frost nor snow) frequent showers of rain fall, and the surface of the earth is covered with verdure, the weather being so genial that the gradual approach of summer is scarcely per-

ceptible. The trees, moreover, shed their bark, but there is no fall of the leaf as in England.

In the summer months the heat parches the ground, which consequently at this time affords no nourishment to the grass, and the latter soon languishes, and becomes so burned up on the plains and hills that are not well sheltered by the foliage of trees, that it appears like the stubble of corn-fields, and will break under the feet when trampled upon. This is the worst season in which to judge of the beauties of the country, and, were it not for the warmth, the appearance of the land might be mistaken for the effect produced on vegetation by severe winter; for extremes meet, heat produces the same result to the herbage as cold, and clothes the ground with a like sombre hue. During the summer, however, there are frequently copious showers of rain, and then the effect is magical, for in the space of two or three days the whole country assumes a delicate green tint, after which, if the showers continue, vegetation is astonishingly rapid.

It is seldom in South Australia that rain is long wanted; and it is a fact, that ever since the colony has been established no droughts have been occasioned by deficiency in this respect. I subjoin an abstract of the rain gauge kept in Adelaide by G. S. Kingston, Esq., commencing 15th August, 1838, and ending 5th December, 1844.

Months.	1838.		1839.		1840.		1841.		1842.		1843.		1844.		Mean average for each month.	
	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.
January	No observation.	No observation.	.453	7	.335	3	.45	2	.37	4	0.21	3	0.41	6	0.372	4
February			.446	3	2.01	5	.35	3	.71	4	0.54	4	0.175	4	0.705	4
March			.85	6	.437	7	.81	4	1.015	4	0.59	4	0.74	6	0.78	5
April			.37	5	1.202	10	3.57	12	1.808	10	1.05	6	1.68	16	1.624	10
May			.24	5	1.487	7	1.71	8	2.05	13	2.98	10	1.845	19	1.719	10
June			3.49	10	3.274	11	2.32	7	2.401	13	1.72	13	1.138	9	2.387	11
July			2.128	12	1.90	8	.857	10	2.09	14	3.307	20	3.685	19	2.313	14
August	1.649	6	4.767	16	2.829	16	2.813	15	2.77	17	2.160	15	2.115	17	2.729	15
September.....	.438	6	.85	10	4.64	16	2.045	10	1.931	9	1.085	12	2.34	16	1.904	11
October.....	2.353	10	2.57	9	1.9	6	.94	6	2.733	19	1.66	12	1.045	9	1.886	10
November.....	.82	3	3.31	14	.19	4	.47	6	1.19	8	0.20	3				
December	1.65	3	.345	5	3.82	6	1.71	10	1.35	4	1.70	3				
			19.840	102	23.997	99	18.045	93	20.418	119	17.212	105				

The thermometer ranges from 37° to 115° of Fahrenheit, and the change from heat to cold is frequently sudden, as much as 50° difference being experienced in a few hours. The quick changes of temperature, however, are not found to injure health, and the cool of the evening is looked forward to with no fear, but with considerable anticipation. This is particularly the case after a hot wind has been blowing for any time, when to all appearance no speedy change can be expected, and so determined is the current of stifling air (over 90° of heat) that it fills every nook and cranny of the dwellings: under these circumstances, who can express the pleasure of experiencing a change of wind, accompanied with rain, which beats down the dust, clears the air, and so alters the aspect of affairs, that you may freely inhale the invigorating breeze, and again put on the clothes which were doffed in despair?

As I said in a former part of the work, the large plains are the only parts of the colony that are troubled with the hot winds, and this only during the heat of summer; moreover, these winds seldom last more than a few hours; in other parts, although the heat may be as great, it is not so exhausting, and I have not unfrequently both walked and ridden under the blazing sun for long distances, without feeling oppressed myself, or having my horse injured by it. In short, for my own part, I prefer the unadulterated warm climate of Australia to the murky, suffocating air of London during the heat of summer, even though the latter may have the advantage of a few additional degrees of cold.

South Australia seems indeed blessed in its beautiful climate above all the other parts of that vast continent; for, as I before mentioned, it has hitherto, escaped, and it is to be hoped ever will escape, the dreadful droughts that have been so injurious to some of the neighbouring settlements. New South Wales has been very unfortunate in this respect; and it is certainly a considerable drawback to any person proposing to farm in that country. The effects of the "Great Drought," as it is still called, which commenced in 1826, and lasted four years, are fresh in the memory of many; as well they may be, for they were dreadful; ruining many of the settlers, and causing the destruction of horses, cattle, and sheep innumerable. One farmer is said to have lost five consecutive crops of grain, and many other persons were in as bad a plight.

February is considered the hottest of the summer months, which comprise November, December, January, February, March and April. In order to enable the reader to judge for himself, I shall now insert the average monthly results of the meteorological observations taken at the Surveyor-General's office, Victoria Square, Adelaide, during one year, viz., from April, 1844, to March, 1845, both inclusive, at the hours of 10 A.M., 12 A.M., 2 P.M., 4 P.M., of each day, Sundays excepted.

	Mean. Ther.	Mean. Bar.	Highest. Ther.	Highest. Bar.	Lowest. Ther.	Lowest. Bar.
1844.						
April						
10 o'Clock	63¾		81½		53½	
12 „	65½		86		53½	
2 „	67½		85		55½	
4 „	64½		82		54	
May						
10 „	60		73		46	
12 „	63		75		49	
2 „	62½		56		53	
4 „	60		74½		50	
June						
10 „	55		65		47½	
12 „	58		68		49	
2 „	58		67		49	
4 „	56½		63		49½	
July						
10 „	54¼		59		48	
12 „	54		60		48	
2 „	55½		60½		49½	
4 „	53¾		58½		49	
August						
10 „	57	29.82	63	30.29	53	29.51
12 „	58½		67		53	
2 „	59½		68		52	
4 „	57½	29.70	61½	30.20	53	29.33
September						
10 „	59	29.89	66	30.23	53½	29.12
12 „	60½		69		54½	
2 „	61¾		72½		55½	
4 „	60	29.80	72	30.16	53½	29.
October						
10 o'Clock	66½	26.94	86½	30.22	55	29.60
12 „	68½		92		56	
2 „	68½		94½		55	
4 „	69	29.87	96½	30.20	53½	29.
November						
10 „	70¾	29.88	88	30.20	62	29.56
12 „	73¼		92		63	
2 „	73¾		93½		59	
4 „	71¾	29.86	92	30.20	60	29.51
December						
10 „	80¼	29.876	99	30.220	70½	28.380
12 „	82		103		67½	
2 „	83½		100		68	
4 „	82¼	29.895	100	30.160	67	29.460
1845.						
January						
10 o'Clock	83½	29.835	102½	30.085	70	29.520
12 „	85		106		70	
2 „	85		106½		70	
4 „	84½	29.802	101½	30.000	71	29.450
February						
10 „	78¾	29.796	94½	30.120	70½	29.615
12 „	79¾		97		70	
2 „	79½		94		71	
4 „	79	29.839	97½	30.020	70½	29.520
March						
10 „	77¾	29.987	97	30.175	63½	29.889
12 „	80¾		102		59½	
2 „	77¾		103½		58½	
4 „	79	29.970	100	30.1[illegible]	[illegible]	[illegible]

Although a hotter climate than England, I have not found South Australia so subject to violent storms of thunder and lightning as this country; and though in the neighbourhood of the iron-stone ranges I have frequently observed large trees that were thought to have been shattered by the electric fluid, I have never heard of an instance of any damage being done to either life or property. Perhaps this may be partly accounted for by the population being so scattered, and also so few in number. I see, in a late Adelaide paper, that in June last the country was visited by a storm of wind and rain, of which, as it may prove interesting to the reader, I shall here insert an account:—

"The copious rains and stormy gusts, which had been so prevalent during the month, seemed to have reached their climax on Saturday last, when about noon a sort of land tornado checked or completely arrested the progress of all who were unlucky enough to be then unhoused. After a series of short and delusive intervals, the rain descended in torrents, and continued almost without intermission through the night; so that, when the Sabbath dawned, the bosom of the Torrens was any thing but a peaceful scene. The visitors to the margin of the 'angry flood' were very numerous; and although some of the earliest colonists averred that in their day they had seen the river making greater encroachments, we confess we thought they had forgotten the then condition of the river bed, choked as it was in many parts with an infinitude of prostrate logs, which have since disappeared before the axe of the white man, the toma-

hawk of his sable brother, and other causes of progressive removal which have left the water channel comparatively clear. Frome Bridge once more proved that it has a 'charmed life,' for the Cyclopean logs and ponderous water-borne accumulations, which beset it for hours together, seemed to make but too sure the work of devastation. The new stone bridge, commonly known as that of the city, received a rough baptism from Old Father Torrens, instead of a gentle sprinkling from the hand of some lady fair, and, although at one time assailed by overwhelming billows, escaped the watery ordeal, and remains (itself) unscathed, albeit the approaches already require what a banker would call a renewal of the metal. Wilkins's Bridge is fundamentally in *statu quo;* but the superstructure again wants to be replaced as if it were an annual gift. The quantity of drift wood, and winter melons and pumpkins, which followed in rapid succession down the stream, were eagerly seized or speared by the natives assembled below bridge, who secured a considerable number of such indisputable prizes, and seemed to enjoy the sport afforded them by the destruction of many a cherished waterside garden and inclosure. All the tributary streams looked like independent rivers, and each flood had its moving accidents to be put upon record by somebody. A correspondent informs us that the storm was severely felt on Sunday morning last at the residence of John Baker, Esq., near the third creek. A tree was blown down by the violence of the tempest, and, falling upon a hut close by, demolished it. Two men who were within were

hurt, and one of them very seriously; but the latter having obtained prompt medical assistance, is now recovering. Mr. Baker's extensive garden, on which he had lately expended several hundred pounds, was nearly all swept away by the flood, and a great variety of choice and rare trees and plants, collected at a considerable expense, have been irrecoverably lost. The Fourth Creek presented an unusually formidable appearance, and during the worst period a mounted traveller, whose name we have not been able to learn, was carried away by the force of the swollen stream, and narrowly escaped with his life. On the Dry Creek, on the northern road, a house was washed down; and the creek, which had overflowed its banks, had covered the plain on both sides to a considerable depth, so as to render travelling by the ordinary route impracticable. The country at the sources of the Little Para and the head of the Torrens was submerged, and the settlers in that neighbourhood have suffered severely by the resistless deluge, which swept away many of their gardens, fences, and erections." The following is another account of the same event:—" On the afternoon of Saturday the 19th instant, the district on the Sources of the South Para was visited by a severe thunder-storm, accompanied by a heavy fall of rain. The cloud (which was densely black, but frequently illumined by lightning of a silvery whiteness) passed in an easterly direction, and was followed by a squall of wind from the west, with a noise more terrific than the preceding thunder. The current seemed to have been

confined to a space not exceeding two hundred yards in breadth; and so great was the force with which it swept, that large gum trees were torn up by the roots, others had their limbs snapped off and thrown to a great distance, or lodged in the tops of other trees, leaving the trunks standing naked, and the ground literally covered with broken timber. It passed close by several dwellings, and its violence was witnessed by people from their doors; but fortunately no material damage (as yet heard of) has been done."—*Register*, Wednesday, June 23rd.

Earthquakes have been felt, at different times, in the colony, but they have not produced any damage; and there are no appearances observable in the country to indicate their former operation.

The first I ever felt, or rather heard, occurred one night just after I had gone to my bed, which, as I was a visitor at a small hut occupied by a shepherd, was made up on the floor at the time. I was talking to mine host, who occupied a bedstead of very original construction, and, the night being advanced, no sounds were heard outside to break its stillness. I had therefore a favourable opportunity of noticing the phenomena which followed.

My attention was arrested by a low rumbling sound, which appeared to proceed from the earth, and gradually gained strength, until it might be compared to the noise produced by a railway train passing over a bridge; this lasted about half a minute, and then appeared to die away in the distance. As the effect was so slight, and no sensible motion could be observed in the earth, I thought that

its presence would be only very local; but in this conjecture I was deceived, for the same thing was felt near Adelaide, which is about fifty miles from the station at which I was.

It is difficult for any writer to give a good description of the amazing beauty of an Australian sky. The transparency of its colours, various as those of the rainbow, could only be conveyed by a first-rate painter; if, indeed, it be in the power of any one to do justice to such a subject. But if the heavens are grand during the day, the night also, in its more subdued colours and tranquil loveliness, fully equals the daylight scene; then, indeed, the expansive vault claims all our admiration, and every star, shining out with wonderful distinctness, seems to court the attention of the silver moon as she majestically glides upon her allotted path. I have frequently been out on a journey on such a night, and whilst allowing the horse his own time to walk along the road, have solaced myself by reading in the still moonlight. In the bush, at a time like this, the birds having gone to roost (save a species of owl, and one or two other night-birds), all nature seems at rest, and the peace of the scene is unbroken, except by the watch-dogs at the stations challenging the lonely howl of the wild dogs by their deep bark, which is echoed and re-echoed from hill to hill until lost in the distance.

This may perhaps seem a lonely picture, fraught with dreadful associations; but it is not so really, at least I have never experienced any but pleasant feelings on such occasions; for I well knew that in that

country I should meet with no savage or ravenous beasts to mark me for their prey, and with no huge reptiles to swallow both my dread and myself at the same time; as might be the case in the moonlight beauty of other less favoured countries.

Of the diseases that are prevalent in the colony, or to which emigrants are subject on their first arrival, I have little to say; for the general healthfulness of the place gives very little scope for medical information. Many persons, however, are troubled with dysentery, to guard against which I advise great attention to be paid to diet, especially by those who have been confined on board ship, with only salt meat to eat for months, and no vegetables; and who, on that account, are more liable to commit excesses when they first land. Errors of this kind are almost sure to bring on the complaint, particularly in the fruit season.

The Australian dysentery, however, if taken in time, is in general easily subdued, and seldom produces fatal results.

Ophthalmic complaints have been much written of by some writers, but with little cause. The following account of a peculiar trouble may, however, account for the mistake. At particular seasons a small fly is frequently seen; in appearance it is much like the common English house fly, but only about a quarter the size. These insects appear to have an intense desire to imbibe some moisture from the inner corner of the eye, and it need scarcely be said that this is considered a very great liberty and annoyance by the

party concerned; and the consequence is, that whenever a fly is felt to alight a violent blow is aimed at the insect, but which it is usually expert enough to avoid. At last, when the sufferer has become tired of thumping his own head, one of these minute creatures gets fairly to work, and then a sharp sting is felt, which is instantaneously followed by a blow that smashes the "imbiber of forbidden drinks," which perhaps in revenge leaves its proboscis or trunk in the wound. Then you are fairly "in for it," and must make the most of your bargain; for within half an hour the upper and lower eyelids become inflamed, and in a couple of hours the sight is entirely closed by the swelling. This will last a day or two, or even longer; but it may be much relieved by applying a cooling lotion, and, although painful, and most annoying, it does not seem to have the effect of permanently injuring the eyesight.

A few months before I left Adelaide for England, a ship came out which had had some cases of whooping cough while on the passage. This disease was thus imparted to the towns-people, and produced great havoc as well among children as old persons, many of both of which classes fell victims to its ravages. In the late papers, however, there is no mention of it, and I suppose that it has died away. The good folks of Adelaide have, however, been troubled with influenza, the presence of which was ascribed to the great want of public sewers and thorough drainage in the town; though I can scarcely think that this is the cause, or bad indeed would be

the state of London and other large towns, where the population is so great, and so little attention is paid to sanitary measures.

I believe that this short enumeration comprises the diseases that the colonists are liable to; and to compensate for even these, it may be satisfactory to some to know that the climate is famous for the cure of pulmonary and asthmatic diseases, and that many persons are there alive and well who had but little hopes given them of reaching the end of their outward voyage. It is hardly necessary to state, nevertheless, that to effect a certain cure of consumption, &c., the parties should emigrate when their complaint first makes its appearance, and then I imagine that the cure may be depended upon.

Whilst engaged on this subject it may be useful to insert the comparative return of the number of births, marriages, and deaths, registered in the province of South Australia, during the years ended December 31, 1844 and 1845.

BIRTHS.

District.	Males.	Females.	Totals.
Adelaide	378	327	705
Flinders	2	1	3
Totals for 1845	380	328	708
Totals for 1844	354	317	671

MARRIAGES.

Where solemnized.	1844.	1845.
In the Church of England . . .	59	77
„ „ Scotland . . .	21	29
„ Roman Catholic Chapel . .	10	10
„ German Lutheran Church .	6	2
„ Methodist Chapel . . .	2	11
„ Congregational Chapel . .	11	9
„ Office of the Deputy Registrar, Adelaide	1	—
In the Office of the Deputy Registrar, Port Lincoln	—	3
Total	110	141

DEATHS.

Year.	7 years & under.	14 yrs.	21 yrs.	30 yrs.	40 yrs.	50 yrs.	60 yrs.	70 yrs.	75 yrs.	83 yrs.	Male.	Female.	Totals.
1845	147	8	6	19	28	22	3	8	1	1	143	95	238
1844	81	4	4	17	20	6	5	2	1	—	75	65	140

NOTE.—This return merely shows the number of births, marriages, and deaths actually registered in the province; there are at present no satisfactory data for estimating the number of those unregistered.

Compiled from records in the Colonial Secretary's Office.

A. M. MUNDAY, *Colonial Secretary.*

Colonial Secretary's Office,
31st January, 1846.

The seasons in Australia are the reverse of those in England; thus the shortest day in Adelaide occurs in June, when the sun rises at eight minutes past seven, and sets at fifty-two minutes past four; and the longest day is in December, the sun rising at fifty-two minutes past four, and setting at eight minutes past seven. There is very little twilight in the colony, and within twenty minutes after the sun has set every thing is in darkness, if there be no moon.

The Gardener's Calendar, extracted from the *South Australian Almanack*, and which we here insert, shows what months are respectively adapted for the growth of fruit and vegetables, and also somewhat of the method of gardening which we practise in South Australia.

JANUARY.

Kitchen Garden.—Sow cabbage and broccoli early in the month, also kidney beans, carrots, and celery. Plant potatoes, and prepare ground for onions and turnips. Water cucumbers in the evening.

Fruit Garden.—Continue budding peaches, apricots, and nectarines, and thin the lateral shoots of fruit trees. Attend to vines, tying up the advancing shoots to stakes, and stopping the fruit-bearing branches where necessary.

FEBRUARY.

Kitchen Garden.—Finish planting potatoes. Sow broccoli, cauliflower, broad beans, lettuce, and towards the end of the month turnips may be sown. Prepare ground for the general autumnal cropping.

Fruit Garden.—Examine budded trees, and where the bandages pinch they must be removed or slackened. Fruit must be attended to, and gathered before over-ripe; early in the morning is the best time.

MARCH.

Kitchen Garden.—Sow turnips, carrots, beet, broad beans, peas, spinach, lettuce. Transplant broccoli, cauliflower, cabbage and celery; earth up potatoes; manure, dig, and trench all vacant ground, if possible, this month.

Fruit Garden.—Prepare ground for fruit trees, and trench where necessary; towards the end of the month fruit seeds may be sown in nursery beds for stocks.

APRIL.

Kitchen Garden.—Sow peas, broad beans, lettuce, and spinach; also onions and leeks for a general crop; continue to sow cabbage and cauliflower for a spring supply.

Fruit Garden.—Fruit seeds may be sown in nursery beds, for stocks to bud, or graft upon; the ground designed for planting ought to be got ready, if possible, this month.

MAY.

Kitchen Garden.—Sow peas, lettuce, radishes, mustard and cress; transplant cauliflower, broccoli, cabbage, &c.

Fruit Garden.—Transplant peaches, nectarines, and apricots; make new plantations of strawberries, and dress the old.

JUNE.

Kitchen Garden.—Sow peas, turnips, carrots, and lettuce, also radish, mustard and cress; transplant cauliflower, cabbage, lettuce, onions, and leeks.

Fruit Garden.—Transplant fruit trees; prune vines, and dress the vineyard; prepare and plant out cuttings; make layers, and transplant those that are rooted.

JULY.

Kitchen Garden.—Sow peas, turnips, and small salads; plant potatoes, pot-herbs, rhubarb, sea-kale, asparagus; earth up cabbage, cauliflower, broccoli; also peas, and at the same time stake them where necessary.

Fruit Garden.—Finish transplanting all the varieties of deciduous fruits this month; the cuttings of vines, gooseberries, and currants ought also to be planted out without delay; renew the plantations of raspberries, and finish digging the vineyard and orchard.

AUGUST.

Kitchen Garden.—Finish planting potatoes by the middle of the month; sow broccoli and cauliflower; also celery, in a moist shady situation; vegetable marrows and pumpkins may be planted by the middle of the month; prepare ground for kidney beans, tomatoes, &c.

Fruit Garden.—Grafting may be commenced about the middle of the month; prune standard fruit trees; transplant oranges and loquats; prepare ground for melons.

SEPTEMBER.

Kitchen Garden.—Sow kidney beans, vegetable marrows, pumpkins, tomatoes, brignals, capsicums, and New Zealand spinach; transplant onions and leeks; earth up potatoes.

Fruit Garden.—Sow cucumbers, sweet and water melons; transplant and bud oranges on lemon or citron stocks; attend to newly grafted trees, and, where fairly taken, remove the clay and bandages.

OCTOBER.

Kitchen Garden.—Continue to sow kidney beans, vegetable marrows, and pumpkins; transplant tomatoes, brignals, and capsicums; also broccoli and cauliflower.

Fruit Garden.—Examine the young grafts frequently, and displace all suckers and side shoots; thin the fruit on the peach, nectarine, and apricot; summer dress vines.

NOVEMBER.

Kitchen Garden.—Finish transplanting tomatoes, brignals, &c.; successional sowings of vegetable marrows and kidney beans may still be made; attend to water newly planted vegetables; collect seeds as they ripen.

Fruit Garden.—Thin the lateral shoots of fruit trees; displace the superabundant wood of vines, and secure the fruit-bearing branches by fastening them to stakes; thin and earth up melons and cucumbers.

DECEMBER.

Kitchen Garden.—Sow kidney beans; also vegetable marrows, for a late supply; collect seeds as they ripen; prepare ground for potatoes.

Fruit Garden.—Continue to thin the lateral shoots of fruit trees, and dress and tie up vines; water cucumbers in the evenings only; melons require frequent attention, in order to regulate the extending shoots; fruit trees may now be budded.

Some parts of the colony are thickly wooded, but these are generally inferior in point of soil, which consists often of little but masses of iron stone, or a species of granite, thinly coated over with hungry yellow clay mixed more or less with sand and pebbles; on this poor and dry country, however, the largest trees are found. These, like almost all the great forest species of South Australia, belong to the *Eucalyptus* tribe, which seems to pervade the vast island of New Holland. They are generally tall and straight in their growth, and of huge girth, and many of them measure 100 feet to the lowest branches. The limbs or branches are thinly scattered on the head, and scantily furnished with narrow leaves, and the ground underneath them is therefore nearly destitute of shade; they are evergreens, and, as I said above, possess the peculiarity of shedding their bark instead of their leaves.

The most common kind in South Australia is the *Eucalyptus* or Stringy Bark, so called from the outside

bark being in appearance like the fibrous husk of the cocoa nut, called *coir*, and made into mats and ropes. Among the other species are the *Eucalyptus globulus*, or Blue Gum; *Eucalyptus resinifera*, or White Gum; *Eucalyptus piperita*, or Peppermint Gum, with many more; but the above are the principal both for size and usefulness. With the exception of the Stringy Bark, they all grow on good rich land, some of them preferring wet damp soils, and others the high hilly districts. Their timber is adapted for the different purposes of building and fencing, and also for making carts, ploughs, and agricultural implements. The timber of all the varieties is hard and solid when dry, but while green, or freshly cut down, it is easily sawn to any size. It is, however, usually cut into lengths, and split with wedges and a maul into posts and rails for fences, or into broad and narrow paling, shingles, or laths for houses or outbuildings. The timber, being almost common property, is very cheap. The houses in Adelaide are, in many cases, covered with thin shingles of it, which are generally preferred to slates in that climate, where the latter would be much hotter than the wooden roofs. The shingles are from fifteen to eighteen inches long, and from six to eight inches broad, and are nailed to the battens in the same way as slates.

At certain seasons of the year, the thin outside bark of some trees peels off in long narrow strips or ribbons, and leaves the surface as white as milk; in this state the trees have a peculiar appearance, and furnish a striking and conspicuous object to the new comer.

The flowers of these trees are beautiful, and the air around them is, to a great distance, loaded with their perfume. They are stored with honey, which would be profitable if bees were extensively kept. The blacks often carry a bunch of the fragrant blossoms with them, and suck the honey as they tramp along the roads; the parrot and cockatoo also feast upon the flowers to their hearts' content.

The bud is shaped like an urn or goblet, and is hard, compact and woody, covered with a beautiful lid, which is thrust off to allow the tightly compressed stamens to escape and expand.

The large trees, with rare exceptions, are more or less hollow, either from the effects of dry rot, from the white ants, or from the fires that annually rage around them. Some of them are excavated both in the trunk and the larger branches; and when this is the case they form a shelter for numbers of opossums, which live in the holes, and feed upon the young aromatic leaves. These opossums are a great article of food with the natives, who show much sagacity in finding their hiding-places, and catching the animals; for which purpose they are obliged to climb large, straight and smooth trees, which they manage by means of a small axe and a sharp-pointed stick. They commence by chopping out a little piece of bark, and into the notch thus left they insert the toes of one foot, and, making a spring, plunge the sharp point of the stick into the tree as high up as they can reach with the left hand, which is kept as

close to the bark as possible, in order to bear the greater weight; when this is done, another little hole is cut in the bark at about three feet distance from the former, and then the toes of the other foot are firmly placed in it, and the stick plunged in higher up again, until they have reached the desired elevation, when they examine the cavity of the tree by poking their stick into it, if they do not at once see their game. They feel with the stick the soft body of the opossum when one is inside, in which case also a few hairs will generally adhere to the weapon. When they find one, they soon get it out, either by cutting a hole lower down the hollow trunk, or else by inserting one arm into the aperture, catching the animal, and drawing it out by the tail, after which they give it a tap before it can turn round to bite them, which the opossum would otherwise do severely.

The bark of the Stringy Bark tree is often peeled off in large and broad sheets, and used for covering huts and sheds; but it is always unsightly, and requires long heavy poles laid over it on the roofs, to prevent it from curling up with the heat of the sun. It is therefore only used for inferior buildings, or for making the native worleys or huts.

From all the trees of this tribe a kind of gum exudes very plentifully, but I do not know whether it is useful or not. Were it of value, it might be easily collected, for it is seen dropping from the limbs, and often running down the trunk, in bright scarlet lines, like blood, and where it falls upon the ground it re-

mains, and seems to poison the vegetation, leaving a bare and profitless ring around the butt, equal to the extent of the overhanging limbs.

On this account the Gum trees should be removed from the cultivated land; the easier way to do which is to grub them up, and remove or burn them root and branch. If they be cut down, the stumps are always a loss of land, from the roots lying close to the surface; and the labour of afterwards digging them out of the earth is greater than if the whole tree were there to assist by its weight in the uprooting.

The Peppermint Gum, when first cut, has a strong and agreeable scent like peppermint, whence its name. This species grows occasionally in large numbers, forming forests, but it seems to require a much better soil than the Stringy Bark, to which it is inferior for building purposes. The inferiority does not consist so much in the nature of the timber, as in the growth of the tree, which is low, stunted and crooked in comparison. It is, however, useful for fire-wood, for which the Stringy Bark is not fitted.

In New South Wales manna is obtained from a tree of this tribe, which exists there in largeish quantities; but in South Australia the quantity obtained is small, and few persons are even aware of its existence. The manna is found on the ground under the trees, and is supposed to be a concretion on the leaves and small branches, and not an exudation from the stem. It is picked up in pieces from the size of a hazel nut down to that of coarse salt, and is very sweet and palatable, not possessing

the mawkish taste of the manna of commerce; it has, however, the aperient qualities that make our manna valuable.

All the species of *Eucalyptus* are hardy, and will live after being severely scorched, and the interiors of the trunk quite burned out; so that in a large tree the thickness of wall often does not exceed six inches, and yet, if it have but a strip of connecting bark to convey the sap to the upper parts, it will flourish, and the limbs attain a great size. Some old and decayed trees are unable, from their roots rotting, to hold up their broad heads, and fall to the ground, carrying every thing before them; but when down, if a small root be unbroken, and firm in the earth, that root will give life to the old trunk, which will throw up shoots, and these will increase to large and handsome trees, living on the parent trunk, and connected with the earth by a root not larger in circumference than a man's wrist.

THE ACACIA TRIBE.

The next class of trees most important to the colonists is the Acacia tribe, of which many varieties are found. The Acacias are generally handsome and umbrageous, and by their beautiful light green foliage make a pleasant variety in a scene where so many of the native trees are sombre and even unsightly.

The most valuable species of this order are the *Acacia fragrans* or Wattle, and the *Acacia affinis* or Silver Wattle; these are esteemed both for their bark, which is used in tanning, and for the gum that exudes

from them plentifully in hot weather. It is only of late years that this gum has become an article of commerce. The trees are numerous, and, when covered with their bright yellow globose-headed and fragrant flowers, they are exceedingly beautiful.

GUM.

About the month of January these trees are more or less covered with their clear shining gum in different-sized pieces, some as small as a pin's head, and others as large as a goose's egg. When the sun is rising or setting, and shining through the transparent masses, the effect is as if the trees were loaded with little balls of fire. During the months that the trees give out their treasure, many persons sally from the town and villages, taking their wives and children with them, and driving a team of bullocks, or a horse and cart, containing their provisions and bedding, and a sufficiency of empty bags to hold the gum. These parties are called *gummers*, and during the season the bush is quite alive with them, and every where they may be seen with a little knapsack or wallet slung over the shoulder, and a knife or other instrument to separate the gum from the tree. The Wattle, as it is there called, grows in clusters scattered over the hills and plains; in some places being very dense and in large quantities, and in others merely straggling among other kinds of trees. The places are anxiously sought after where the Wattles grow most plentifully, and there, where all was solitude a few days before, may be seen horses and bul-

locks, drays, carts, tents, and men, women and children, roaming up hill and down dale, until their bags are filled or the supply is exhausted. Some of the white people bargain with the natives to pick for them, and pay them so much for their labour. The common way is, to find the blacks in food, meat, flour, tea and sugar, and tobacco, and give them a bag to fill. These bags, when full, weigh about 200 lbs., for which the black receives a flannel shirt, a pair of trousers, or, what he is most fond of, a blanket. When paid in this manner, the blacks work well and willingly; often, when the gum is plentiful, picking from 45 to 50 lbs. a day, and sometimes more. In addition to picking it from the trees, they clear all the little bits of wood or bark from it, and make it fit for the market. In Adelaide it is bought by the merchants at about 20*s.* the 100 lbs., and generally sells here at from 60*s.* to 80*s.* Some persons make a large sum by their gumming, and all find it more profitable than working for a master. The season lasts for about three months, or until the cold or wet weather sets in, and washes the gum from the trees. This gum is only inferior to the Gum Acacia sold in the shops in England, in not being properly cultivated and sorted, to separate the clear and bright from the dark-coloured and inferior kinds. The natives roast the gum in the fire, and then eat it, seemingly with a great relish, and I suppose it is very nutritious. They were quite astonished when first they saw the white men collecting it all over the country, and feared that when it was all gone they would starve. They found, however, that all who were willing to work for the

whites as gummers got better fed and clothed than heretofore, and it has been a means of making them more civilized than they were previously.

No attention was paid to this valuable article of export before the year 1841, when the amount collected did not exceed 30*l.* in value; this was sent to England more as an experiment than as a business speculation. During the following year the quantity picked is not stated, but it was small. In 1843 it had amounted to 542 cwts., which sold in Adelaide at 486*l.*; and in 1844 as much as 2362 cwts., valued at 2500*l.* 15*s.*, was exported to Great Britain. Since then the amount has gone on steadily increasing, the quantity picked in 1846 being probably nearly double that collected in 1844.

The bark of the Wattle is valuable for the purposes of tanning, and quantities of the trees have been destroyed on this account. Some few years since, any person was allowed to collect the bark on the Government lands, but when the value of the gum became known this was very properly put a stop to.

In 1841, 9 tons of the bark were exported, valued at 28*l.*; in 1842, 24 tons, at 170*l.*; in 1843, 120 tons = 442*l.*; and in 1844, 856 tons, valued at 3310*l.* In addition to this, a large quantity is used in the town, where seven tanneries are established, which are wholly supplied from the colonial Wattles. But I believe that during the last year not more than 100 tons at most would be collected, and this most likely by persons clearing their own lands of superfluous timber. The medicinal properties of the bark of the

Acacia fragrans are said to equal those of the Peruvian bark in certain fevers. For this purpose the bark should be young and thin, and care should be taken to strip it during the summer months.

Many varieties of the Wattle or *Acacia* are seen in the conservatories in England; and, when these are in flower, they may afford the spectator some little idea of the beauty of the scenery in Australia, where such trees abound, and impart a fragrant scent to the air, far and near. This scent is even sometimes oppressive in the hot weather, the atmosphere being loaded with it; and as one rides over hill and plain covered with these trees, and immersed in their exhalations, a few gasps of mere air are pleasant enough amidst such dense waves of odour.

The Wattles are liable to be attacked by a large grub that bores its way into the tree, and continues eating the wood, gradually extending its ravages. The blacks are fond of these grubs, and hunt among the trees to find those where they have taken up their abode; and as soon as they come upon the track of the grub they speedily hook it out, and devour it with signs that leave you no doubt that they consider it a great luxury. Europeans also have sometimes eaten these grubs, and pronounced them excellent; but certainly the appearance of them is enough for any one at all delicate of stomach.

It is amusing (when one is not squeamish) to see the blacks on the above occasions: they seem to glory in their superior taste, and, while crunching the tight grub between their teeth, they quite pity you

for not knowing what is luscious and *récherché*. Are they, however, less civilized in this respect than our oyster-eaters?

The Wattles are often covered with gall-nuts or apples, which possess a large proportion of tannin, and would be a valuable export, although as yet, in consequence of the price of labour, but little of this article has been picked; but that little is enough to demonstrate the value of the galls.

Another valuable and elegant tree is the *Acacia melanoxylon*, or Blackwood, which is found invariably on good rich land, and in appearance much resembles the young oak. The timber is tough and straight-grained, and, like lancewood, well adapted for any articles requiring spring and great durability, as the shafts of gigs and carts, the beams of ploughs, and the handles of agricultural and mechanical instruments. These trees are seldom more than 15 inches in diameter, but the barrels are straight and the wood clean, and easily split or worked, having a beautiful grain, and making durable and handsome furniture. The flowers of this tree are white and abundant, and the seeds furnish the main food for numerous birds during several months of the year. The bark of the tree abounds in tannin; and, as many acres of this variety are sometimes grubbed up and cleared to make the land ready for the plough, it would, perhaps, be advisable to strip off the bark for the tanners, especially as the wattle is now so valuable from the gum that it yields, that the stripping of it has been discontinued.

The *Casuarina tortulosa*, or She Oak, is useful for

fences, but is inferior in size to the gum trees; the wood is, however, durable, and stands the heat of the climate well. This tree is found scattered over all the good parts of the colony, but is by no means ornamental; the foliage is sombre, and the tree looks dry and stunted. It has no leaves, but elongations of the branches instead, which gives the tree the appearance of being covered with coarse hair, that waves about in the wind, and has a melancholy aspect. The seed is confined in cones like those on the common fir, and when the cones are quite young and green they contain, as do also the ends of the branches, a strong and refreshing acid, very grateful to the traveller who is short of water. Excellent vinegar has been made from this, and it must be wholesome to many animals, or otherwise they would be killed by devouring it, as they do whenever they can reach the trees. The wood is capital for fires, and keeps in, and smoulders away, until all is consumed: on this account, any one going from his hut for a few hours puts a piece of the wood on the fire, and, slightly covering it with hot ashes, is pretty sure to have a good fire burning when he returns. In England, where nothing but coal is used, this virtue in the timber will not be appreciated, but where no coal is burned such a firewood is a great emolument.

The *Ecocapus cupressiformis*, or Native Cherry, is a conical tree, in appearance much like the Cyprus, and the handsomest of all the trees common to Australia; but the wood is little used, and the fruit from which it obtains its name is not larger than a pea,

and has the stone on the outside. This fruit is much relished by the birds, but for human kind is not worth the trouble of picking. The wood is close and compact, but does not possess much strength; apart from this, it is, when polished, very beautiful, and is sometimes made into workboxes, or tables are veneered with it.

A curious tree is found growing in almost all the places where fresh surface water is found; this is *the Tea Tree,* for what reason so named I cannot tell; probably because the bushmen, when short of tea, sometimes make this plant a substitute; but the beverage is poor stuff, about as palatable as the water that cabbages are boiled in. The stem is generally small and slender, and, if 15 feet high, will not exceed the thickness of one's thumb. Sometimes, but rarely, it is as much as 6 or 8 inches in diameter, and from 40 to 60 feet high, and then it makes good poles for fencing, rafters for houses, and is useful for many other purposes.

When a new tract of land is discovered, the first and principal object looked for is water, without which the land would be little worth; hence, wherever the Tea Tree is seen, thither the explorers direct their steps, certain of meeting with water, on, or near the surface of the ground. The particular nature of the soil may be generally known by the trees growing upon it. Thus the Stringy Bark is found on poor clayey soil; the different Gums on a richer and better land; the Oak and Blackwood, on rich strong land; and the Honeysuckle on light sandy soil. This last species is a curious, but, for the present, useless tree. The wood is spongy, and unfit for furniture, imple-

ments, or other articles, and little worth even as firewood.

I have here only noticed a few of the most common colonial trees; but there are many others, as well as shrubs, that may prove valuable both for timber and for their medicinal qualities: among the latter may be mentioned the Sassafras, Cascarilla, and Sarsaparilla.

The Sarsaparilla grows abundantly in almost all parts of the colony where the land is good, and is pronounced of excellent quality. When in the colony, we were in the habit of boiling it down for some hours over a slow fire, and drinking it like tea, with milk and sugar; and, in addition to its nutritive and purificatory qualities, we found it extremely palatable, and not inferior, in our opinion, to chocolate, which it resembles in taste.

I noticed one thing in regard to this herb or plant which may be worth recording. A hill near where I lived was plentifully covered with rich tender grass, and here and there the Sarsaparilla was growing in clusters, and spreading itself over the ground something like the ivy in England. When sheep, infected with the scab and other diseases, were turned out on this hill, they invariably sought after, and greedily devoured the plant, leaving the young grass and herbs, to which they are so partial, to hunt after the sarsaparilla.

Sarsaparilla grows best on a rich sandy soil, and runs over the ground, shooting down its roots from the different knots in its branches, from which young shoots again spring up; and thus it covers the ground for a great distance. I have seen

it as long as twenty feet after being gathered, and the thickness at the butt not more than that of a finger.

Flax might be an article of export on a large scale, if any one, understanding its growth and manufacture, would expend a little money and labour about it; for, where a plant or tree is now found growing wild in the bush, there can be little doubt of the climate being adapted to its culture.

Geraniums grow wild near the sea-shore, and in other sandy places; but they are generally small, and have only little flowers, without much scent. The cultivated geraniums, however, grow most luxuriantly, and make good hedges for gardens, rising six or eight feet high, and during the season, covered with their blossoms, presenting a most splendid appearance. They are evergreens in those parts; and as there is no frost to hurt them, they stand from year to year, increasing in size, and require constant trimming, like the most luxuriant English hedges.

I have compiled a short description of several trees and plants, which I am of opinion are well adapted to the soil and climate of South Australia, and of which, when in the colony, I was anxious to learn something, foreseeing, as I did, that they would be profitable to cultivate, and, moreover, need entail but little expense at the commencement of the undertaking.

The cultivation of such productions is not, it is true, duly appreciated at present; and, even where it enters the settler's mind, the great difficulty experienced is the want of sufficient knowledge on the subject to enable him either to grow them properly,

or subsequently to prepare them as required before they can become articles of commerce. On this account many farmers are satisfied perforce with their crops of wheat, potatoes and the like, although they probably, in common with myself, are convinced that the culture of the hop, olive, indigo plant, tobacco, and mulberry would be found more remunerative than the above, and require a less space of ground, as well as a smaller number of able-bodied men, because the chief work might be done by women and children.

I advise all those who intend farming in Australia to possess themselves of some good work on the habits and treatment of these plants and trees. I have no doubt that knowledge of this kind will be most useful in a pecuniary point of view, and very conducive besides to the comfort and enjoyments, and even to the refinement and education, of the settler.

HOPS.

The hop was first brought into England from the Netherlands in the year 1524, and three different varieties of it are cultivated. There is the long and square garlic hop, the long white hop, and the oval hop, all of which are cultivated in England. The richest and strongest soils are best adapted for their growth; and, if the ground be rocky within two or three feet of the surface, the hops will prosper well, but they by no means thrive on a stiff clay, or on spongy wet land. The new land is always considered the best by the Kentish planters, who reckon that

the hops begin to fail about the tenth year. Much expense is incurred in England in manuring the land, but the hop is found to yield abundantly in Australia, where no manure is used.

The hops should be planted on little hills, eight or nine feet apart, that the air may freely pass between them. The two best sorts for planting are the white and the grey bind; the latter is a large square hop, more hardy and a more plentiful bearer, and ripens later than the former. There is also another sort of the white bind, which ripens a week or ten days before the common; but this is more tender, and a less plentiful bearer, though it has the advantage of coming first to market.

As to the manner of planting, there should be five good sets planted in each hill, one in the middle, and the rest round about sloping, the tops meeting at the centre; they must stand even with the surface of the ground; let them be pressed close with the hand, and covered with fine earth; and let a stick be placed on each side the hill to secure it.

The charge of an acre of hop ground in most parts of England is computed thus—3*l.* for the husbandry, 4*l.* for the wear of the poles, 5*l.* for picking and drying, 1*l.* 10*s.* for dung, 1*l.* for rent; in all, 15*l.* a year. The hop planters reckon that they have but a moderate return when the produce of an acre of hops does not sell for more than 30*l.*; frequently it fetches 50*l.*, 60*l.*, 80*l.*, or 100*l.*

Much labour would be saved in Australia by the plan here mentioned, not only on account of dressing not being required for the land, but also from the

hops, after producing one year, being cut down, and left on the ground, without any fear of the roots being destroyed by the frost: moreover, the cold is never sufficiently severe to nip or otherwise destroy the tender shoots.

Those few persons who have tried the cultivation of this plant find it answer remarkably well, and yield a great profit; but as yet little has been grown, so that the experience in that part is slight.

In Adelaide the price of hops is quoted at from 2*s.* 6*d.* to 3*s.* per pound. Any person, therefore, turning his attention to this article, might depend upon making a good sum for his produce. I believe hops might be grown and sold with a profit at 1*s.* per lb. There are already as many as eleven breweries established, and hence the consumption of hops must be great. The expense of 1*l.* rent, as reckoned in England, would be spared; this would purchase the land in Adelaide. The drying is performed in the open air with little expense, and manure will not be required for years to come. Any number of poles may be obtained without more cost than the cartage and cutting; thus there would be a clear gain of 7*l.* 10*s.* from the expenses incurred in England. As the hops are at a distance of so many feet apart, tobacco or melons might be planted between them without any detriment to either crop. Five or six acres of land cultivated in this way would realize as much as 600*l.*, the expenses of which would be about 250*l.* Many parts of the colony, particularly the Mount Barker districts, and also the country to the south, are admirably adapted for hop culture, there

being a rich vegetable mould, with, in many places, a substratum of limestone.

The soil best adapted for the growth of the hop is a deep rich loam, with a substratum of limestone, or gravel, at a depth of two or three feet. On a poorer soil hops will also grow well, if well manured; but this must cause an additional expense for dressing.

The hop, as I said before, grows badly in clay soils; and therefore its cultivation in such places should not be attempted by any one who intends to make a living by the plant. All kinds of soil may be bought by the new comer, and as the only trouble in obtaining it consists in making search in different directions, it will be well worth while to select a ground which is naturally fit for the purpose. Not much difficulty would be experienced in obtaining cuttings or plants to commence with, for the hop is already sufficiently grown to ensure a supply of cuttings from old stools, the increase of which, after the first year, will enable the grower to supply himself. The soil should be as fine and as much pulverised as possible, and all weeds must be thoroughly eradicated.

ORANGE AND LEMON TREES.

The cultivation of orange and lemon trees would be profitable near the town of Adelaide. They grow well in all parts of the colony where they have been tried, and it will be years before sufficient are produced to satisfy the demand for their fruits among the townspeople. In Sydney they are grown in great abundance, and are worth about 2*s.* a dozen; and as

one tree will often bear from 400 to 600 dozen in the year, the profit, even at 6*d.* or 9*d.*, would be great. They require little care after they have once taken root, except keeping the soil around each root well weeded. Nothing can be imagined more pleasant, or more in keeping with a foreign home, than surrounding it with these tropical fruit trees; and I am sure that the profit will always amply repay any expense incurred upon them. All kinds of fruit trees may be procured in Adelaide, either at the auctions, when the trees arrive from Van Diemen's Land, or from the market gardeners, who always have a good supply for small sums, and which may generally be depended upon as healthy and choice.

THE OLIVE.

In Languedoc and Provence, where the olive tree is greatly cultivated, it is propagated by truncheons split from the roots of the trees, and the husbandman is careful to preserve a few roots to the truncheon; these are planted about two feet deep in the ground, covering the surface with litter or mulch to prevent the sun and wind from penetrating and drying the ground. When the plants have taken new root, the planters assiduously stir the ground and destroy the weeds. These trees will grow in almost any soil, but when they are planted in rich moist ground they grow larger, and make a finer appearance than in poor land: but the fruit is of less esteem, because the oil made from it is not so good as that which is produced in leaner soil. The chalky ground is esteemed the best for the trees, and the oil which is made from

the trees growing in that sort of land is much finer, and will keep longer than the other kinds. The oil is pressed out of the olives, which are laid together for a time to wither, and then ground in a mill; and, having hot water poured on them, they are pressed out, the water subsiding, and the oil swimming on the top. What is drawn from the unripe olives is called *omphacinum*, and is accounted useful for some medicinal purposes; what is pressed out of the ripe fruit is called *oil of olives*, being what is generally eaten and made use of in medicine; the different fineness results from the different care and management in the making it.

The olives while on the trees are intolerably bitter, without any thing of that delicious taste which procures them admittance to the richest tables: to fit them for which they must be prepared as follows:— Long before they are ripe enough to yield oil, they are gathered, and laid to steep some days in fresh water; when taken out, they are put into a ley made of water, prepared of barilla or kali, with ashes of the olive stones calcined, or at least with lime. They are next laid in a liquor of water and salt, with which they are put into those small barrels wherein they are brought to us. To give them a flavour the preservers throw over them an essence composed of cloves, cinnamon, coriander and fennel. This essence is a kind of secret among those who deal in it; and, in effect, it is in this essence that all the difficulty of the preparation lies.

The olive is principally propagated by seeds, cuttings, or layers; seedling plants are reckoned the

most durable, and are preferred in Italy to those obtained by any other method. Sow the seeds in autumn in drills a foot apart, and transplant the seedlings in the following November in rows three feet apart; let them remain there for two years longer; then plant them where they are finally to remain in rows twenty feet apart, and sixteen feet in the rows. The best season for propagating by cuttings is in November or December, and for layers January. The trees grow from twenty to thirty feet high, and are evergreen. In pruning, the object should be to get a regular supply of bearing wood of the preceding season's growth; for which purpose shorten the shoots of the former year, and the laterals will produce fruit in due season. The olive is most fruitful when planted in a sandy, gravelly, schistous or rocky soil.

INDIGO.

This plant is indigenous in some parts of the colony, and there is little doubt that any person understanding its cultivation and manufacture would find it answer his purpose to grow it. Heretofore no attention has been paid to the matter; but it seems too valuable an article to remain long neglected in a place where the capabilities for raising it are so great as in Australia.

Any enterprising person adopting these suggestions would be a friend to the whole community. The species commonly cultivated for use is the Guatamala *indigo*, with smooth arched pods growing close to the branches, unequal winged leaves, whose lobes are

blunt and oval. Labat has given a particular account of the culture of the plant and the preparations of the indigo. The ground being thoroughly cleared of weeds (one of the principal points in the culture), little trenches are made about two or three inches deep, about a foot distance from one another each way; then some seeds are dropped into each trench, and afterwards covered with the earth that was previously taken out. In moist weather the plant comes up in three or four days, and in about two months after it is fit for cutting. If suffered to stand till it runs into flower, the leaves become too dry and hard, and the indigo obtained from them proves less in quantity as well as beauty. The due point of maturity is known by the leaves beginning to grow less supple or more brittle. In rainy seasons the cutting may be repeated every six weeks: cutting in dry weather kills the plant, which otherwise continues to afford fresh crops for two years.

A large quantity of the herb is put into a vat or cistern of strong mason work, with enough water to cover it, and some wood is laid above to prevent its rising up. The matter begins to ferment sooner or later according to the warmth of the weather and the maturity of the plant; sometimes in six or eight hours, and sometimes not in less than twenty. The liquor grows hot, throws up a plentiful froth, thickens by degrees, and acquires a blue colour inclining to violet. At this time, without touching the herb, the liquor impregnated with its tincture is let out, by cocks in the bottom, into another vat placed for that purpose, so as to be commanded by the first.

In the second vat the liquor is strongly and incessantly beaten and agitated with a kind of buckets fixed to poles till the colouring matter is united into a body. A good deal of nicety is requisite in hitting this point. If the beating is discontinued too soon, a part of the tinging matter remains dissolved in the liquor; if continued a little too long, a part of that which had separated is dissolved afresh. The exact time of discontinuing the process is determined by taking up some of the liquor occasionally in a little cup, and observing whether the blue fecula is disposed to separate and subside. The whole being now suffered to rest till the blue matter has settled, the clear water is let off by cocks in the sides at different heights, and the blue part discharged by a cock in the bottom to another vat. Here it is suffered to settle for some time longer, then further drained in cloth bags, and exposed in shallow wooden boxes to the air, without exposing it to the sun; and it is carefully kept from the rain till thoroughly dry. It is said that lime, or lime water, is sometimes employed in the beating vat to promote the separation of the tinging particles from the water, and that the hardness or flintiness of some sorts of indigo is owing to an over proportion of this addition. Pomet says that the Indians of the village of Sarguesse, from which the most esteemed indigo is brought, near Amandabat, use only the leaves of the indigo, and throw away the plant and branches.

It may be useful to give a description of the plant, that any person may know it if he should meet with it in Australia. The flower is of the butterfly kind,

the standard open bordered and reflexed; the wings are oblong, blunt and spread open, as is also the keel, which turns backwards; in the centre is situated a cylindrical germen, which becomes a taper pod filled with kidney-shaped seeds. Miller enumerates five species of indigo, and Linnæus six *.

When I was in Adelaide many persons were said to know of quantities of this plant growing wild in the bush, where it was reported to thrive well. If cultivated, it would be a means of great wealth to the colony. The labour of sowing and cutting would not appear to be great, and the scheme is assuredly worth trial.

TOBACCO.

Should any one wonder whether South Australia will grow good tobacco, and feel an interest in that plant, he will be both pleased and surprised at the fine leaves grown there, and exhibited annually at the agricultural and horticultural shows of the colony. Many of these leaves and plants are giants of their kind, and demonstrate the advantages that might be reaped by any one who understood the plant, and the modes of manufacturing it for the market. The quantity of tobacco smoked in Australia is considerable, and the duty upon it yields the government a sum of nearly 4000*l.* annually; it is generally imported from America, but some large importations are made from New South Wales, whose colonists

* Much of our information about the cultivation and manufacture of indigo is extracted from Chambers's Dictionary, article *Indigo*.

have long since found the benefit derived from the cultivation of tobacco. Much tobacco is grown even now in South Australia, but it is wholly used for sheep dressing, not from any defect in the article, but from the South Australians not knowing the mode of its manufacture. Many persons, in my knowledge, have tried to make it fit for the market, but have not succeeded in accommodating it to the smoker. Enough has, however, been done to show the importance of the plant, and the capacity of the climate for its luxuriant growth. The best soil for it is rich black alluvial mould, mixed with wood ashes, or burned vegetable matter. The seeds are sown in June, and transplanted on well-worked land when they show the fourth leaf. The plants are kept three feet apart each way, and watered in the evening of the first few days after planting, if rain does not fall. When they are beginning to flower, they require weeding and earthing up, and when the flower shows itself it should be pinched off by hand, together with any withered or supernumerary leaves. Only a certain number of leaves (not exceeding eight when a good leaf is wanted), and these, the strongest and best, should be left on the plant: all shoots also and suckers should be pinched off as soon as they make their appearance. The tops and shoots may be collected in baskets, and dried in the shade, and are useful for dressing diseased sheep, and thus will realize a small profit, or help to pay expenses. When dry, they contain a good proportion of the strength of the plant, and sell at about 4*d.* or 5*d.* per lb. When the plant or leaf changes to a light yellowish green, and

the leaf feels thick to the touch, it is fit for cutting and drying.

The culture of the plant is simple enough; but now comes the difficult part. The leaves should be hung up separately, so as not to touch each other whilst drying. The shed where they are suspended should be impervious to the sun, but have at the same time a sufficient draught of fresh air. After a lapse of two or three days the sap or moisture in the leaves will evaporate, and then they are taken down and carefully laid on a wooden floor in a heap; when in this state, they are covered over with matting, or any thing to keep up the fermentation, and a heavy weight is placed on the top of the pile. They should be kept thus closed up until a thermometer shows that the heat in the middle of the heap is not more than 150°, and when they arrive at this heat (generally in two or three days) the heap requires moving carefully, the outside changing place with the inside, to take its turn in the fermenting or sweating process. After this, each leaf is hung up separately to dry, and again sweated in heaps, and then again dried thoroughly; after which it is fitted for the market, for the manufacture of cigars or lighter kinds of tobacco, as the common cut shag, returns, &c. The manufacture of the kinds called Negro-head and Cavendish requires more care and time; but this is the kind that would be chiefly required for the colonial market. The stalk, after the leaf is cut off, is sold for sheep wash at 5*d.* or 6*d.* per lb. The stalks or unfermented leaves of this kind of tobacco are annually used, to the extent of many tons, by the sheep farmer.

THE MULBERRY.

The common mulberry tree grows naturally in Persia, from whence it was first brought to the southern parts of Europe. It is propagated either by cuttings, or by laying down the tender branches, which in one year will be well rooted, and may be cut from the tree, and transplanted into the places where they are to remain. But the better way is to propagate by cuttings, which, if rightly chosen and skilfully managed, take root very well. These cuttings should be the shoots of the former year, with one joint of the two years' wood at the bottom; and they should be planted their whole length, leaving two or three buds above ground. The planting should be in light rich earth, pressing the ground pretty close around the plants, and they should be transplanted the following spring into a nursery, and then trained to stems by fixing down stakes, to each of which the principal shoots are fastened; most of the lateral branches be closely pruned off, leaving only two or three of the weaker to detain the sap for the augmentation of the stem. The mulberry tree thrives best in a light soil, neither very wet nor very dry: it should always have an open exposure, for if planted too near trees or buildings, and shaded thereby, the fruit seldom ripens well. The soil under the mulberry trees should be dug up every year and manured, which proves of great service to the fruit. The trees intended for feeding silkworms are not suffered to grow tall, but kept in a kind of hedge, and instead of pulling off the leaves singly they are cut off with shears, together with the young branches; this is not

only much sooner and more easily done, but it is less injurious to the trees. The mulberry grows most luxuriantly in Australia, and is a great ornament to the garden or orchard, independently of its value as affording pasture to the silkworm, and through its instrumentality a living to man. Notwithstanding the price of labour in the colony, I have little fear of the mulberry being profitable in the rearing of silkworms. Women and children may attend to its growth and cultivation, and the many young people now springing up, and too weak to go out to hard work, and too young to be left their own masters, may find employment in this way. I am not aware of the drawbacks to be expected in the pursuit, but should imagine that no country has more advantages than South Australia for the breeding of the worm, and also for the cultivation of the tree, which there grows and thrives with the greatest vigour.

CHAPTER IX.

WILD DOGS.—LOCUSTS.—THE WOMBAT.—THE KANGAROO.—THE EMU.

FEW countries can be found where there are not some wild animals or other, more or less destructive; but I hardly know of any land so much blessed in this respect as Australia. The freedom from such pests there will be appreciated by any one who has lived in countries where ferocious or dangerous beasts abound.

The only large animal known to be destructive to the property of the settlers is the wild dog, as it is there called, or, in the language of the blacks, the dingoe. When the white people first arrived, this animal was found domesticated by the blacks, and was used for hunting the kangaroo and emu; but it is not known with what success; indeed the wild dog is not generally swift enough for the pursuit. One mode of hunting which the blacks adopted, was to observe the pads or paths the kangaroo most frequented, and place long nets across them. By alarming the kangaroo, and making a loud noise, they succeed in making it take the right direction

and get entangled in the nets, and when in this helpless state they easily kill it. If the kangaroo, however, makes off in a different direction, they endeavour to wound it by their spears, and here the dogs are useful; for, although they might not be able to overtake their game when healthy, they can generally catch it when weak or wounded.

These dogs are always considered as natives of Australia, for no animal exactly corresponding with them is found elsewhere; and, when first discovered, they were plentiful, and hunted in large packs. Their general appearance is between that of the wolf and the fox, and they are about the size of the latter. The colour varies from a very dark brown to yellow, but most generally they have a reddish shade like the English fox. At present they have mixed with the tame dogs, and their colour and appearance is often changed by the cross.

The noise these brutes make is quite different from the bark of the tame dogs, which has led many persons to suppose that all kinds of dogs becoming wild lose the propensity to barking. This may be the case; but, although I have seen the dingoes tamed, yet I never heard them make any other noise than a growl when angry, or a howl when scenting their prey, which is quite a different sound from the noise of the domestic watch-dog.

A breed between the dingoe and the tame dog is, as I have said, not uncommon; and the mongrels are much more to be dreaded than the real native breed, being more courageous, and evincing a strong liking to the flesh of all kinds of tame animals, as

sheep, goats, pigs, and often calves; and, moreover, on account of their superior breed, they are swift and dangerous antagonists. I remember some years since a large dog was killed at Willunga, where it had done much damage to various flocks of sheep. It was the size of a lurcher, and very much of that breed, and the tame dogs were averse to attacking it. It is not uncommon for the wild dog, when he finds that the fight is going against him, to sham death, and suffer himself to be skinned or beaten about without a groan or any signs of life; but if his enemies quit him, thinking him really dead, he will gently open one eye, see that the road is clear, and hobble away. Cats are said to have nine lives; if that be the case with them, the dingoes have at least eighteen.

The mixed breed does more damage to the sheep than the pure, because the shepherds' dogs do not regard these mongrels with the same distrust they entertain of their native brethen, although they are often more ferocious.

An animal very like the Australian dingoe is known in North America, where it is called the prairie wolf. This is described as about the size of the native dog, and of a reddish cast, and the habits of the two, in some things, correspond. The American species is said to prey upon all the smaller domestic animals, as pigs, rabbits, sheep, and lambs, and to be very destructive to poultry. Naturally timid, they seldom approach a farm-house where dogs are kept, unless when pressed by hunger; and, even then, they sneak along with noiseless step, and watch every chance of seizing their prey without alarming the watch-dogs,

which should they do, they will not come to an engagement, but retreat with great despatch.

In South Australia these animals are the greatest enemy the sheep farmer has, and the havoc which they commit would hardly be credited. They have been the ruin of many persons, and not a day passes without their doing some damage; moreover, although every means is taken to cause their destruction, yet but few are caught. The grand object with them seems to be to kill as many sheep as possible in the shortest space of time, and hard they work to attain this end, by snapping first on one side and then on the other; throwing the sheep down and with one bite, either in the chest or throat, killing them outright; and all this so suddenly, that they will kill twenty or thirty in five minutes. When they are quite exhausted with their labour, they commence quietly eating their victims, tearing them to pieces often before they are dead. I have seen sheep that have been attacked in the night, alive, with the whole of the muscles of the hind legs eaten away, and this is not a rare occurrence. The bite of the dogs is also poisonous, and generally fatal, and consequently the damage is great wherever they get among the flock.

They hunt by scent and in packs, often chasing the kangaroo. I have seen them when in full chase, and they appear to get over the ground very swiftly. When the kangaroo sits up to fight, they have not the courage to spring boldly at it, but endeavour to take the poor beast at a disadvantage, by getting behind him. They are sure to make him their victim in

the end, if they can only come up with him; although, as the kangaroo fights very hard, they are often badly wounded in the encounter. It is said that, when this is the case with one of the dingoes, the others destroy it, and feast upon the carcass; but, as they are commonly little else than skin and bone, they must be sorely hungry before they resort to such a meal.

These dogs are in the habit of running on scent over the whole ground the sheep have traversed in the day, and woe be to any poor creature that has been left out on the run. When pursuing on scent, the dogs make a melancholy howling noise, which at night has a very lonely sound, and makes one seriously inquire whether or not they are known to attack human beings. This is not the case, however, although it is impossible to say what they might do when pressed with hunger. They often follow men along the road, of which I remember one instance that caused the subject of it great alarm. He was going home with some fresh meat on his shoulder, and a native dog (a very large one) was, I suppose, attracted by the smell, and, the man thought, did not intend to let go the prize without a brush for it. The dog followed him at about five yards' distance, and frequently gave a short growl. He tried to frighten the creature by stopping and shouting, but this had no effect; and at last, from walking, he got into sharp jog-trot, and at last, when at full speed, he saw that the brute was making up to him, he abandoned his supper, and did not leave off running until at the right side of the door of his hut.

These animals are soon tamed, but what they are

fit for is a question not easily answered; and the only advantage hitherto taken of their civilized state has been to obtain a cross between them and the sheep dogs. These half-bred dogs are found to be very acute in their scent, and also to stand great fatigue in the sun, and on this account they are much prized. The dingoe will, if taken young, play about and follow its master in a few days. The kangaroo, emu, and other native animals and birds, are also easily brought under subjection, and I do not remember any instance of their afterwards returning to their wild state.

The native dogs are fond of horses, and frequently remain close to them for several hours. When riding along the roads in the bush, I have often noticed them following me like the tame dog. It is said that the native dogs never leap over any obstacle, such as a gate, but climb up it; this is a generally received notion, but I have heard it disputed. Various modes are used to catch them, but generally with little success, for they quite equal the English fox in cunning; but, notwithstanding their astuteness, the following method is rather too complicated for them to see the drift of; it is called *making them commit suicide*, and is thus:—The country in Australia is generally covered with dead trees, many limbs and trunks of which have been hollowed out by the fires. One of these trunks is selected, and one end of it stopped up with turf or stones. The stock of a loaded gun is then firmly fixed in the stopped up end, with a string to the trigger, and at the end of the string a piece of meat, which is placed about two feet or so from the

entrance; and about one foot from the muzzle of the gun. When the dogs catch hold of the meat, and give it a pull, the gun goes off, and generally shoots them dead upon the spot. I have known one killed by this means every night for a week; so that the method may be said to succeed well. The greatest pleasure is always manifested by the settlers whenever they have killed one of these brutes, which can hardly be wondered at, when it is remembered what a dreadful nuisance they are. As an inducement to get rid of them, a reward was some few years since offered for their heads. This, for a dog, was 5*s.*, and for a bitch 7*s.* 6*d.*, and a great many were caught; but not enough to make any material difference in their number. Like the fox in England they are used in Australia for hunting, or rather for being hunted, and are said to give good sport, and sometimes, after severe runs, to escape with their brush unhurt. But hunting there is much more severe work than fox hunting in this country. The hills are high and steep, the forests dense and choked up with dead and fallen timber; and these places are generally the favourite resort of the dingoes. It requires an active horse and bold rider to keep up under such obstacles. When caught by the hounds, the wild dingoes fight gallantly, and few dogs are hardy enough to attack them after having had one of their bites.

The smell of the dingoe, like that of the fox, is strong, and therefore there is little difficulty for the hounds to follow it at full speed. They run hard, and to keep up with them the hunter is obliged to give

his horse head-way. I have seen one of these creatures overtaken by the dogs, and its entrails torn out, try afterwards to escape with them dragging a yard behind. Where no dogs are kept, they become very bold and troublesome, prowling about the huts, and carrying off any thing having the least smell or appearance of animality. One night I was unable to reach a station whither I was bound, and was obliged to hobble the horse, which I turned out in the beautiful valley of Mipunga. After I had made some tea, and eaten my supper, I prepared my bed (a great coat on the ground and a blanket for a covering), and putting the bridle under the saddle, which was my pillow, I soon went to sleep, and only awoke as the day was breaking. The horse was all right, feeding close to me, but, on getting the bridle to put on him, I found that the dogs had been at it and eaten it all up, except part of the reins and the bit, which last had been considered indigestible by them, for a wonder! At the same time they took away an iron spoon, which was greasy, and which I afterwards recovered, and found it covered with their teeth marks.

They run in packs of six or eight, and the male, female, and young appear to congregate together. They never show fight if they can run away.

The lambing time is that in which the farmers have most to dread from the dingoes, which at this season become more daring, and prowl about the folds, snapping at the young lambs inside, and if they can once get hold of them they either drag them through the hurdles, or carry a bite of flesh away. During

the day the dingoes lie concealed, and only come out at night.

The LOCUSTS are the next great annoyance the colonists have to encounter, and these only appeared about three years ago, when they came in vast numbers, no one knew where from. They are the same species of locust in every respect as is seen in other parts of the world, and certainly they are a pest wherever found. They were first observed close to the town, and for two years were confined to some two or three miles round Adelaide; but now they have extended their march, and bid fair to ravage the whole country.

Many different means have been proposed for their extinction, but as yet with little or no success. They appear in the form of very small black grasshoppers, and in this state their destruction would be more easy than when they are full grown and able to fly to a distance of many yards. They deposit their eggs in the ground in holes which they bore for the purpose, their tails being covered with a hard sheath peculiarly adapted for the work; and the eggs remain in the cells until the next summer's sun hatches them, when the locusts reappear in increased numbers. A writer in the Adelaide papers fancies that vast numbers might be destroyed by having a fire carried about the town in a low cart or truck, as they have been found to fly into the blaze, and become consumed; but this is too partial to do any permanent good, or make the least perceptible difference in their numbers. That man would be a great benefactor to many countries, who could devise some means that

would destroy them. Before the town of Adelaide became so populous, and so many cattle were introduced, the grass was able to attain some considerable growth, and annual burnings of it had the effect of destroying countless multitudes of insects that now are allowed to live and increase. The grass is eaten at present almost as soon as it appears, and during the hot weather is much too scarce to enable the fire to make a continuous line, without which very many insects must escape the flame, and the burning will do little good.

The destruction the locusts cause is beyond belief. A garden covered with verdure two days before is left by them as bare as the middle of a road. Nothing escapes them when once they make an attack, and especially on the dry plains, where they exist in vast numbers.

The following description is given of them in the "Memoirs of Lady Hester Stanhope," and it singularly applies to the locusts of South Australia. Lady Hester was residing in Zoon, near Mount Lebanon.

"Their eggs," says she, "form a small cylinder about as big as a maggot, and in minute appearance like an ear of Turkey corn; all the little eggs are as so many pins' heads lying in rows, with the beautiful uniformity so constant in all the works of the Creator. How many of these conglomerate little masses each female locust lays I know not; but those I handled were enough to equal in size a hazel nut, and united by some glutinous matter. They are hatched about May." *In Adelaide about January.* "No sooner had the swarms laid their eggs, than, to prevent their

hatching, an order was enforced all through the district where the locusts had settled, obliging every member of a family above a certain age to bring for so many days (say) half a gallon of eggs to the village green, where, lighted faggots being thrown on them, they were consumed. The order was in full force for probably three weeks, until it was supposed that the greatest part of the eggs had been dug up and destroyed. The peasants know by certain signs when the females have laid the eggs, but the utmost vigilance may overlook some ovaries; and as each clot of the size of a nut may produce 5000 locusts, it may be easily imagined how they swarm as soon as they are hatched. What one first sees is a black heap about the size of the brim of a coalheaver's hat. A day or two after the heap spreads for some yards round, and consists of little black grasshopper-like things, all jumping here and there with such dazzling agility as to fatigue the eye. Soon afterwards they begin to march in one direction, and to eat; and then they spread so widely through a whole province, that a person may ride for leagues and leagues, and his horse will never put a foot to the ground without crushing three or four at a step: it is then the peasants rush to their fields, if fortunate enough to meet the vanguard of this formidable and destructive army. With hoes, shovels, pickaxes, and the like, they dig a trench as deep as time will permit across their march, and, then, as the locusts, which never turn aside for any thing, enter, they bury, burn and crush them until exhaustion compels them to desist; or until, as was the case this year, from previous destruction of

the insects' eggs, and from having only partial swarms to contend with, they succeed in nearly annihilating them. . . . The greatest enemy to locusts is a high wind, which carries them to the sea and drowns them; or, opposing their course, drives them back to the desert, probably to perish for want of sustenance." (Chap. iii. page 260.)

Such is the account given of these noxious creatures in that part of the world, and I have copied it here, because many useful hints may be gathered from it, and perhaps may be the cause of even a partial extinction of the locusts, in case they become so bad as to require such stringent measures as those above described. In the summer of 1846 they were a great nuisance; and, as they would rise from the ground and fly in all directions to avoid being trampled upon, it was no uncommon occurrence to receive severe blows on the face from their sharp armed heads. As already stated, they first appeared in the town of Adelaide, and soon committed great ravages there on the young shoots of trees, and all kinds of vegetables and flowers, which they quickly destroyed; but they did not extend more than three or four miles on either side of the city for the first year. Having laid their eggs they then disappeared, but only to come forth in larger numbers the summer following; and in 1847 many had appeared at Mipunga, a distance from town of more than 30 miles. However, that season but little damage was expected from them there, the wheat being too far advanced to be devoured by them.

I knew a woman who kept a public-house at North

Adelaide, and who collected more than a couple of gallons of locusts from her floors the morning after a storm of wind and rain. The insects had made their way into her house, and from some unexplained cause vast numbers of them died during the night.

Among other proposals for their extinction was that of setting the grass on fire, and burning the locusts; but the originators of this scheme forgot that about the town the herbage is too scanty to make a blaze. Still the suggestion, at any rate, showed that people were taking some trouble to devise means for the destruction of these pests; and I think it would be well for the Agricultural and Horticultural Society in Adelaide to offer a reward to any person throwing some light on the best method of extermination.

The following letter to the Editors of the "South Australian Register" will show that many are doing what they can for the general good. "There seems to me little doubt that a mode might be found of snaring these locusts, especially if the trial were made before they became too strong on the wing. Nets fastened to the tops of fences might do for some time, as the locusts will not, for a month or two, fly to a sufficient height to soar over them. I have heard moving snares recommended, attached to wheel carriages, and there is no doubt that by their agency millions of the noxious creatures would be destroyed; but these could only come into use, supposing there to be no other objections, in the latter part of the season, when the take, indeed, might be numerous; but the chorus might tauntingly arise, "What are they amongst so many?" I must say that I much

doubt if any remedy will be found effectual which is based on the idea of catching the fully formed insect; first, for the reason hinted at above; and, secondly, because the greater part of the mischief will have been done during its growth. I fancy if the evil be not extinguished in the bud, all subsequent attempts will be fruitless, or their benefit at most but partial. The use of hedges of castor oil, and other plants known to be poisonous to the locust, is doubtless good as a matter of local protection, and may do much towards thinning their numbers, should such fences become general; but it depends too much on individual exertion and cooperation to be relied upon. I believe it is admitted that the larvæ of the locust are destroyed in most instances by the plough; and it is probable were the Park Lands broken up, and placed under cultivation, the town gardens would be greatly protected; but it is rather a general than a local remedy which is required. Be this as it may, the pest is universal, or at least migratory, and therefore the remedy will need the aid of the legislature, and must be universally applied. The general planting of herbs destructive to the locusts might be easily enforced, and the cultivation of public lands in the immediate neighbourhood of Adelaide might not only aid in the attainment of the object, but be beneficial in other ways even if it failed to be quite effectual." This letter was published on the 26th October, 1846, and shows that the evil is more serious than might generally be supposed. It is fortunate that the locusts do not appear until the wheat has attained too much strength to suffer from them, otherwise they

would cause the entire ruin of the agricultural farmer. Besides the castor oil tree (*Palma Christi*), all the varieties of the lupins are poisonous to them. The locusts seem to be very partial to these substances, and are found dead in heaps under the bushes from their effect.

In some parts of the colony that curious animal the *Wombat* is found in considerable numbers, living in holes in the ground. The wombat is timid, and seldom seen, and only comes out of its hole at night to feed, and scampers in again on the slightest noise. The blacks are fond of its flesh, which is said to have the flavour of the kangaroo, but to be much more delicate and white: it is also fatter, which with the blacks is a great desideratum. In appearance the wombat is something like a very small pig, or between that and a badger, if such a mixture can be imagined. The legs and feet are like the badger's; the mouth like a rabbit's, with four front teeth; and the body in shape is like that of a pig, except that it has no tail, and is covered with a thick dark gray fur. The wombat seldom weighs more than 20 lbs., and is not eaten by the settlers, though there can be little doubt that it is good wholesome food. The burrows are generally in large plains, and the holes themselves are extensive, almost like sunken pits, and difficult to avoid when riding fast, on account of the grass growing over and around them; so that the first intimation the horseman receives of their locality is by his steed stumbling into one, in which case he is lucky if he and it come out unhurt. I remember one poor fellow who was hunting a kangaroo across

a large plain, and, in consequence of his horse falling into one of these pits, he was thrown violently to the ground, and killed on the spot. A curious circumstance happened to the body: the place where the accident occurred was at a distance of three or four miles from any station, and on the horse returning home with marks of his fall about him, search was immediately made for his rider. Four days passed before he was found, and then, wonderful to relate, the body was uninjured by either the dogs or the birds of prey, as the eagles, hawks of crows. After finding him, the body remained all night on the spot to await the coroner's inquest, and the next morning, on going there, (no watch having been kept,) it was found partly devoured by the wild dogs, who had most likely been following the track of the party who discovered it.

When the first emigrants landed they found many kangaroos and emus scattered over the plains and hills, and, as they were not difficult to kill, numbers were taken and used as food in place of the salt provisions the voyagers had been so long accustomed to. At present kangaroos are seldom seen except in the dense forests, or patches of scrub, where they are comparatively safe from their enemy, man; but even in such places they are often hunted, and thus obliged gradually to move away further as the population advances; so that in the course of a very few years they will be quite scarce in the colony. Some of the kangaroos are very fierce, and fight hard when they find they have no chance of escape by flight; but whenever they can run away they always do so. Instances are known of their carrying a man in their

arms, in one case as much as twenty yards; and only putting him down on being attacked by the dogs. This has been doubted by many persons, but the fact is not so uncommon as to require proof, especially among those who have seen these animals in their free state. I myself have killed them weighing as much as 200 lbs., and standing, when fighting, more than six feet high. The whole of the above weight is composed of skin, blood, bone and muscle, without any fat in the inside; and hence the strength such creatures must possess may easily be conceived to be very great.

I remember the dogs one day put one up after rather a short run, so that we were on the spot almost as soon as he sat up to fight, in a thick bush. This was what is called *an old man*, and he fought so hard with the dogs, that although they were good ones, they became timid at the idea of getting into his clutches. I had a pocket pistol, and went up to him to fire at his head, when, after having taken aim, and being in the act of pulling the trigger, I saw a friend, who was hunting with me, pop up his head in the direct line of my mark. I had barely time to slant the pistol a hair's breadth on one side, when it went off, fortunately missing my companion, but the kangaroo also. The report frightened the creature, and it made one spring clear of the bush, and then tried to escape. The dogs, however, again caught it, and held it fast until one of them was badly cut by its hind leg; and now, finding nothing else for it but courage, it made up its mind to fight for its life. We had a lad of about fourteen years of age with us,

and the kangaroo seemed to have a great desire to give him a squeeze, or a cut, for it made two or three distinct springs at him, and was only kept off by the dogs rushing in the moment they found that his attention was diverted from them; and in the last of these sallies they managed to get him down, and commenced worrying him while on the ground. As the animal was what we call a *boomer*, or an old experienced fighter, which the scars on his body testified, I was very desirous to put an end to the *scrimmage*, as he might very likely cut the dogs severely if left to himself. Watching an opportunity, I threw myself upon him, and, after receiving a large clasp knife from my companion, began sawing away at his throat. As the knife was any thing but sharp, and the skin very tough, this was no easy matter; but, after a time, the brute became rather nervous at the lengths I was going with his throat, and, springing up, knocked the dogs on one side, and once more stood at bay. I thought I had got into company with something rather more serious than a kangaroo, when I found that I could neither shoot him nor cut his throat; but the dogs rushing in upon him altogether again tumbled him over, and a rap on the head settled *our* hash, for I afterwards helped to eat him. We carried him home—or at least his hind quarters and skin—and we had enough to do to get that much along, for, when alive, he must have weighed more than 200 lbs.

I remember the same day I saw the dogs chasing a female, or as they are called in Australia, *a flying doe*. I had often seen the kangaroo at full speed,

but never any thing to equal the rate at which this one went. The motion of her hind legs was too quick to be seen, and at the distance at which I was from her, the body resembled a ball flying along with wonderful rapidity. It is needless to say that the dogs could do nothing with her, for every jump she took increased her distance from them, notwithstanding that they were dogs that could step out when required.

Some kangaroos seem to be aware that the dogs are encouraged by man. I have known one or two instances where they have endeavoured to retaliate in their own way by giving either a cut or a squeeze, but, in my own experience, only one instance, as before mentioned, has happened where they have gained their object. This man was carried about twenty yards in the arms of the kangaroo, which was evidently making for a water-hole to deposit his burden under the surface, but the dogs rescued the man, and afterwards killed the kangaroo.

Not unfrequently the creature will take to the water, and then fight with the dogs, who stand but a poor chance so much out of their proper element. Once I put up a kangaroo, and after a severe fight with the dogs (I was disabled in the right arm and could not help them) in a large water-hole, they mastered him, and his body settled down to the bottom. They do not swim, but by supporting themselves on the tip of the tail and the ends of their long legs, they stand up a great height in deep water. When they catch a dog, they pop him under water, and there keep him, if not obliged to quit their hold

by his companions. The kangaroo I have just mentioned did this with a dog about nine months old, and kept him down so long that, although he soon recovered, no inducement could ever make him go in again, either at that or any other time; he was what the New South Wales blacks call *gerrand*, that is to say, frightened.

These creatures, like all the known Australian animals, are easily tamed. A young kangaroo, only a week or so after being caught, will follow any person about, run and play with the dogs, jump on a table at meal times, and perform all kinds of queer tricks, amongst others eating cooked meat, or, like the lord mayor's fool, "any thing that is good." Very little difficulty would be found in domesticating a number of these interesting and innocent creatures, and letting them run and increase like the deer in our English parks. I fear that if something of this kind be not done, in order to keep a few alive in the settled districts, in a few years they will be as great a curiosity as in other countries, and be shown about in South Australia in caravans. There may be a little pleasure in hunting them experienced by the new comer, but this soon wears off; and as the poor creatures do no harm, I think that after a little time every one will be anxious and willing to let them live in their native wilds unmolested and admired. Many drawings of these animals would give any person the notion that they are clumsy and uncertain in their gait; this, however, is not the case, for if grace and precision with beauty of motion be combined in any animal, that animal is the kangaroo or its tribe.

Of the emu I have seen but little in its native state. I have never been able to catch one, although I have hunted several; but I have seen them after they have been killed, and remarked the beauty of their double feathers, their want of wings, and the great quantity of fat or oil about their bodies. I have seen them at a distance scouring the hills and valleys with immense strides, but this is all that I know from experience of their habits or peculiarities. The oil that is taken from their carcass is said to be a remedy for the rheumatism, and useful in cases of bruises or scalds. It is in great request in the bush; but whether valuable as a medicine I am not in a position to determine.

Porcupines have been lately found on Kangaroo Island; but it is difficult to imagine how they originally got there, for they are not found on the mainland, and their existence is unknown to the natives. A short time since six were brought over and shown to the blacks, who evinced great surprise, and evidently did not know what to make of the quill drivers.

CHAPTER X.

MINES AND MINERALS OF SOUTH AUSTRALIA.

THE last three or four years have made a wonderful change in the monetary affairs of South Australia, and the rapid rise of the colony in this respect may be ascribed to the vast masses of minerals discovered during the period. When the affairs of the colony were at the lowest ebb, and little but ruin was apparent on every side, when labourers were too plentiful, and almost English pauperism was felt by many—even then the first glad news of great quantities of copper and lead, silver and gold, being contained in the mountains and hills, was eagerly spread abroad; and, from a state of misery, the colonists were roused to exertion; and to this, as much as to any thing, may be ascribed the present welfare of the South Australian community. No doubt South Australia would in time have arisen, without this stimulus, from its misery and despondency by its agricultural and pastoral riches; but the rise must have been slow, and many years have passed away before it could have reached its present state.

The first mine was discovered within sight of the

town, on a broad bold range that rises from the plain on which Adelaide is built. The road from Mount Barker, and the different parts to the east of Adelaide, passed over this range; and, as the hill was steep, large drags were placed behind the drays to enable the bullocks to hold back and steadily descend the hill. One of these drags, striking against a stone in the road, broke off some shining substance, which was found to be good lead ore; and when this was seen, every person was in a state of excitement until the place was opened, and the lode of ore discovered. After this event, lead was found in other places along the range, and soon in places in all directions; and exaggerated accounts were promulgated, the only wonder being that all this had never been seen before. Copper and lead were found quite conspicuous in land of all descriptions; one man found them in his field, another dug pieces up in his garden; they were discovered in the dry water-courses, and clinging to the roots of trees; and each passer by, in town or out of town, had his pockets weighed down with specimens. Nothing was heard of but mines, minerals and mineral lands, special surveys and grand mining companies.

All this turned out well; and fortunate it was that it did so; for if no mines of value had been opened, the excitement had so altered the channel of labour and steady industry, that the consequences would have been bad. In reality, then, the mines are not only plentiful and abundant, but the ores are extremely rich, perhaps exceeding in value any before discovered elsewhere. New comers are particularly struck with the

great show of wealth; but it has developed itself so gradually to the colonists that they are becoming indifferent to it, and think little of new mineral discoveries, having made up their minds by anticipation to all such, and merely say, "Ah! no doubt it is everywhere." The rage for carrying about specimens has, moreover, subsided, and only chimney-pieces are now burdened with them.

The misery and poverty of the colonists was at its highest pitch in the year 1843, in which year only 598 acres of land were sold by Government; and this at an average of 1*l.* 0*s.* 6¼*d.*; whereas, in the former year, the amount sold was 17,081½ acres; and in 1844, 3428 acres; since that time, the amount of land sold has been very large. Special surveys of 20,000 acres each have been purchased, besides a large quantity of eighty-acre sections. The price of land sold by the Government has been considerable, as much as 88*l.* 15*s.* per acre having, in one instance, been paid for eighty acres; and in many cases the land has realized from 40*l.* to 50*l.* per acre.

A gentleman who arrived in Adelaide, from Swan River, to inspect the newly discovered minerals and their locality, says, "The whole colony is a mass of mineral wealth—copper, lead, zinc and silver are known, and there is little doubt that quicksilver, gold and precious stones abound. Quicksilver has been found in small quantities; the opal and garnet are found, and there is every reason to infer the presence of gold. Copper and lead are the only mines worked at present. I have examined the two chief mines worked. The Kapunda, belonging to Messrs. Bagot

and Dutton, has shipped this season 1200 tons of ore, producing in England 25*l.* per ton, and landed in England at a cost of not exceeding 19*l.* per ton. The Burra Burra mine is the wonder of the world; it exceeds the celebrated Pargo mines in the ratio of a million to one. The ore is 75 per cent. of metal, a pure oxide, requiring no flux to smelt it; a common blacksmith's forge producing sufficient heat to run the metal. The lode is seventeen feet wide, of vast extent, and is quarried out like stone, in immense masses. Ten weeks' working have sufficed to produce 1700*l.* value of ore. It is impossible to exaggerate when speaking of the minerals of this country." This was within a few months after the purchase of the mine, and before the immense value of the surrounding land was known. Since that time copper has been found on all sides, and the more the ground is explored, the greater is the result. Within the last eighteen months gold has been found in large quantities for that metal, and worked; but I am not aware with what success lately. The gold is worked by the Victoria Mining Company.

In addition to these valuable minerals, iron exists in large quantities, more or less pure in different parts of the colony; but in almost all the hills or ranges to the south of Adelaide it is observed protruding from the land. In the Yankalilla district, it might be collected on the surface, and so pure that the fracture is just the same as that of cast iron; and, in handling it, no sensible difference is felt between the weight of the two. That the South Australian iron will come into extensive use, I entertain no doubt; the ore is of the

same description as the well known Swedish iron. The main expense of it will lie in the smelting and in the labour required to raise it; but if coal be found, it will greatly reduce the first item, and a plentiful and judicious selection of emigrants will soon bring the other to a proper level; so as amply to remunerate both master and labourer at one and the same time. It is extremely probable that before long railways will be extensively made in Australia, and then the above ore will obviate the expense that would be incurred in shipping the rails, and other iron for this species of carriage. Supposing, however, that coal should not be found in South Australia, or brought from New South Wales or Swan River (where it has lately been found in abundance) cheap enough to be used for the purposes of smelting, even then a great and plentiful supply of charcoal may be burned and purchased at about 4*d.* per bushel; and it is well known that iron smelted by charcoal is far superior to that run out from coal or coke.

In the *South Australian* newspaper, dated 22nd June, 1847, I observed the following notice of the quality of the iron ores of that country: "We have just been made acquainted with a proof of the extraordinary richness of iron ores. A blacksmith at Mount Barker, by merely fusing the ore without any other process, has produced a metal of excellent quality, and of which he has made a number of articles. We were shown yesterday a miniature bullock-hook less than one inch in length, made by this blacksmith of the metal so produced; and we are convinced that, if we had only cheap and plentiful labour, the iron

ores of the colony would be an inexhaustible source of wealth."

Adelaide is already supplied with three foundries, and engines of ten-horse power have been made there; thus the great difficulty has been got over, and but little stimulus will be required to enlarge the foundries already formed, or establish others sufficient to supply the colony with engines. Nor is there any want of talent for the purpose, for in that small community there are enough scientific men to carry out such plans—men who, by their inventions and improvements, have raised the colony and the people much above the neighbouring settlements. I do not mean to speak slightingly of any other Australian colony or people; but when I consider the short space of time that Adelaide has been established, and the many disadvantages it has had to struggle through, I cannot but conclude that great perseverance, and much deserving the name of genius, has been brought to bear on its condition; notwithstanding that our colony is now only in its infancy, and that many years will necessarily elapse before its wealth finds a worthy market, and becomes a source of profit to the country.

Scarcely a week passes without some such notice as the following, which appeared in the newspapers about nine months since: "We understand that a very rich lode of copper ore has been opened on section 5526, belonging to the Adelaide Mining Company. Although only partially opened, it is between nine and ten feet wide, and consists of a very superior gray ore; and we are informed that, in the judgment

of an experienced mining captain who visited the mine last week, it is only second to the Burra Burra; and from all we can learn upon the subject, we have no doubt that the property of the company is one of the most valuable in the colony. The distance of the mine from town (only about twelve miles) causes great numbers of persons to visit it, and we believe those who have been there during the last six days have returned highly satisfied with the prospects of the colony."

Any person understanding any thing about mining will instantly perceive the magnitude of such mines as these, and they must for the future have a much more respectable idea of the place than was conceived a few years since, when threatened with bankruptcy and ruin, and its population composed chiefly of insolvent speculators and land jobbers, and ruined farmers and merchants. The farmers could not then get any consumers for their grain, and instead of emigrants arriving, they were going away in large numbers: but since then many have been only happy to return, not having found any place where they were better off, and where they could live in greater comfort or affluence, if they were willing to exert themselves.

The instance of eighty acres of land being sold for 7100*l.* is the only case in which any land fetched so high a price; but from the large and influential companies that have sprung up already, and are constantly springing up, it is clear that, before long, as much as, nay more than this, will be realized from the sale of mineral land; and as one-third of the sum

that the land sells for is appropriated to the purposes of emigration, there must soon arise a considerable fund for that purpose.

The ore is frequently found on the surface, cropping out of the ground in large rock-like masses, as in the case of the Burra Burra, where many thousand tons were discovered in that state, yielding in great part from 50 to 75 per cent. copper. In the Kapunda mine, belonging to Messrs. Bagot and Dutton, a large quantity of ore was found on the top of the ground, and this was also very rich. Other places have indications of copper scattered about in all directions on the top or sides of hills, and frequently in valleys, where it has rolled down many years before. This is the case about the hills near Adelaide, in which are the mines opened by Osmond Gillis, Esq., and one very rich mine belonging to Mr Watkins of Worthing. These two last are lead mines, and both yield large quantities of rich lead as well as silver.

The mines now discovered are so numerous, that a particular description of each would be any thing but interesting; and, therefore, I shall only mention one or two here and there.

The Monticute was purchased by a company for 1550*l.*, and consisted of eighty acres of land, on which some extensive out-croppings had been discovered. This mine has turned out exceedingly well, and the distance of it from the port being only about sixteen miles, it must be a profitable concern. The cartage of the ore is only 1*l.* per ton, and would be much less if it were not necessary to transport it in the

drays over a steep range, that divides the hill on which the mine is situated from the level Adelaide plains.

Mr. Dutton (the author of the very clever and accurate work on South Australia and its mines) does not consider the ore in this mine equal in richness to some of the others, and he mentions the Kapunda as being much richer. Specimens have been analyzed, and found to contain 33 per cent. copper; but this is not the average, which is as low as 18 or 19 per cent. However, this mine, from its short distance from town, and also from its natural advantages, must eventually become much more profitable than it is at present. It is situated on the face of a steep hill, and the workings are by shafts and levels; and hence the rubbish is shot from the mouth of the level down the face of the hill, and by this means all inconvenience from the accumulation of the refuse is obviated. In addition to this, a fine spring of water is constantly running through the property, and affords facilities for cleaning and washing the ore. In 1844 the mine was first worked: during that year about 600 tons were raised, 331 tons of which reached England during 1845, and realized the sum of 4548*l.* 10*s.* The quantity raised in 1845 is estimated at from 600 to 800 tons. Much of our information respecting this mine is gleaned from the work written by Mr. Dutton. Some fine lodes have been discovered contiguous to the Monticute, and some sections sold; it would hardly be reasonable to doubt that there is a quantity of mineral scattered about the mine to a great distance, and that much room is left for future discoveries.

The Murkurta copper mine is the property of G.

Anstey, Esq., and is within three miles north-east of the Monticute. Although this mine has not been much worked, yet enough has been done to prove that it is a valuable property. It was purchased at 1*l.* per acre, and consists of 150 acres: at the time of sale the existence of minerals upon the property was not suspected, or there would have been a sharp competition. One piece of ore weighing 70 lbs. has been taken out of it, and the surrounding rock is filled with indications of a strong lode.

Since the minerals were discovered, the mode of selling the crown lands has considerably altered. Formerly all the land was sold by the Government at the price of 1*l.* per acre, and as those provided with land orders purchased in England, or in the colony, always could command the preference over the colonial purchasers who were not supplied with them, there was often an advanced sum given for an old order, since the older the order, the greater chance there was of commanding the preference in purchase. The person who possessed the oldest order could make sure of any section he required, to the exclusion of all ready-money purchasers and of holders of later orders; but at present, as the land is sold at public auction, and the minimum price is 1*l.*, the highest bidder is the purchaser; and this is the reason of the great difficulty in purchasing land, when it is known to contain minerals. One mine, it is alleged, was not known to be rich in ores, in consequence of the purchaser carefully replacing all loose stones and turf that had been disturbed in seeking the ore, and then painting the rock from which the specimens had been taken uniform in colour

with the surrounding rocks. If this were so, it was certainly a clever, and quite a commercial trick, and seems to have had the desired object.

The Yattagolinga Mine was purchased by Mr. Phillips for 350*l.* the eighty acres, and is situated close to Rapid Bay, about sixty miles to the south of Adelaide. Lead was first found on the land, and afterwards copper; and in some places copper and lead mixed together. This mine has been but little worked, but has, I believe, paid by the quantity raised the price of the labour employed; but as yet no distinct lode has been found to sink to any depth, although on the surface the indications are promising. The mine offers great facilities for working, being situated on the top and side of a steep hill, with a plain at its foot leading to the sea at Rapid Bay. Levels, therefore, may be driven into the hill at a small expense, and nearly all the cost of cartage saved, for the ore need not be carried more than a quarter of a mile to be ready for shipping at the Bay. The assay of some of the ore gives from 20 to 25 per cent. of copper, and the cost of raising and washing, shipping in small cutters or other craft, and conveyance to the port, has not exceeded 5*l.* per ton. If this mine should turn out well, it is better situated than any other, and would be remarkably profitable. Indications of copper exist in the cliff, on the summit of which the minerals are found; and though but slight as regards a continuous lode, they may be traced for at least 200 feet.

The South Australian Company's copper mine adjoins the last-mentioned, and was opened by the

company about three years since, with but little success. This mine possesses all the advantages of the Yattagolinga, and possibly may at a future day be properly opened. The copper gives an average of 19 per cent., but only a few tons have been raised. Lead is also found in small quantities, and silver therein to the amount of 14 oz. to the cwt., an analysis that is highly satisfactory.

In addition to these mines, there are many others, some of which are only lately discovered; indeed every week adds to the number, and notices like the following are usually appearing in the public prints:—"Indications of copper ore have been discovered in the township at Currency Creek. They are very promising, consisting of the azure blue carbonate. The exact site of the discovery is at present not mentioned, but it is only seven miles and a half from the anchorage of Freeman's Knob, through an easy line of country, and no creeks to pass. Mr. Beddome, agent to the Secondary Town Association, only wants an answer from his principals to point out the precise locality to the agents and proprietors of land in the neighbourhood, who as a body are interested largely, though but to a small extent as individuals, as the land lying round the site of the indication has been laid out in half-acre allotments constituting the township."

"At or near the Reedy Creek mineral special survey a remarkable discovery has been made of a metallic substance hitherto new to the colony, and which is said to be tin. There is a lode big enough for three men to work abreast, its tendency being north

and south. It seems impossible to prescribe limits to the lode of which the discovery forms a part; for, according to our informant, it traverses the country until it pierces the cliff of the Murray."

Section 5597, in the county of Adelaide, was purchased by Mr. Wickstead for the sum of 799*l.*, and contains 147 acres of land. This section was reported by the Government to contain extensive minerals, and this was the reason of the high price given by Mr. Wickstead, who was the representative of a company since called the Victoria Mining Company. A short time after the purchase, while sinking a shaft in search of copper, one of the men suddenly broke in upon a vein of metal at the depth of about six fathoms from the surface. The country or soil close adjoining this was known to contain copper, of which metal indications were plentifully visible; but, as this was a totally different-looking substance, there were great surmises expressed as to its nature and properties. The Adelaide papers give this description: "Surrounded and imbedded in dark chocolate-coloured earth or gossen, were thickish layers of a bright yellow metal, pliable to the touch, and evidently unconnected with the neighbouring copper. The vein was about two inches wide, giving metal in the proportion of perhaps a quarter of an ounce to an inch, and showing a tendency to enlarge in size." The person who made this discovery, a miner named Tyrell, gathered up a few pieces, and in the course of the evening arrived in Adelaide with them. "On Monday last," continues the extract, "we had the gratification to examine these specimens, and we

have since seen a much larger number from the same spot. They have been examined by Capt. Frome, Capt. Sturt, Mr. Burr, Deputy Surveyor-General, Dr. Davy, and others, whose scientific and practical knowledge of mineralogy leave the fact without a shadow of doubt, that a most valuable mine of gold has been discovered. Dr. Davy has furnished us with the assay made by him on Thursday, which we subjoin.

Analysis of a specimen of native gold separated from the matrix by the fingers, but not washed or otherwise purified :—

Gold	94
Silver 2.8 or under	3
Oxide of iron accidentally adherent, particles of earthy matter, &c.	3
	100

April 9th, 1846.

E. DAVY.

Such is a short account of the commencement of this apparently splendid discovery, and later papers show that much may be expected, as a continuous lode or vein has been followed up; and, as it improves with the depth, there is every likelihood of its now turning out a profitable speculation for the company.

The lead mines are the Glen Osmond Mine, the Wheal Watkins Mine, the Wheal Gawler Mine, and the Yattagolinga Mine. Of these the Glen Osmond belongs to Osmond Gillis, Esq., who purchased the property, many years since, before the existence of any lead was known, although many indications of

metals had been discovered; and Mr. Menge, a well-known and respected German, versed in geology and mineralogy, had confidently predicted the existence of minerals in different parts, and had devoted much of his time and money to searching for them.

That such an indefatigable and enterprising man should not have been rewarded by the discovery of some valuable mineral deposit is to be regretted; and it is a curious circumstance, that no mines of any value were found by him as a reward for his labour of some years; at the same time that mines have been found by men totally unacquainted, in many instances, with all mineralogical knowledge, and who in its crude form scarcely knew copper from lead: but "the race is not to the swift, nor the battle to the strong."

It is to be hoped that some notice will be taken of this gentleman, and that the colonists, for whose benefit he has been constantly writing and lecturing, will, if possible, reward his exertions.

The Glen Osmond was discovered by a dray passing, and laying bare the shining ore, and, on further examination, many different lodes were found close adjoining. This mine is about six miles from the town, and the whole distance a level plain. It is itself situated on the side of a hill, and offers great facility for working. The quantity raised has been little more than 200 tons, in consequence of the proprietor being unwilling to sink to any great depth without having the aid of an experienced miner; but as that difficulty is now overcome by his brother taking a captain and gang of miners from England, and pro-

viding all necessary implements, there is every hope of some considerable yield coming shortly to the market. The analysis of the ore from this mine shows 75 per cent. lead, and 18 oz. silver, and averaged 13*l.* 13*s.* per ton sold in England, and the cost of raising, clearing and freight is stated not to have exceeded 4*l.* 4*s.* The different varieties of this ore are galena, steel grained, and carbonate of lead, and the mine is one of the most promising near Adelaide; not only from its natural position, but also from its extensive and regular lodes. A company with a capital of 30,000*l.* has been formed in London for the purpose of working this mine and any others they may purchase; and as but a small sum is requisite to obtain the ore when close to the surface, this company will have sufficient capital to set half a dozen mines going for that sum. In England, many thousands of pounds are often expended by mining companies without any return in the shape of minerals; but in Australia, if 100*l.* were sunk without a return, the case would be thought hopeless. The labouring miners there are willing to take tribute, as it is called; that is, they engage to raise the ore, and receive so much, say 2*s.* 6*d.* in the pound, reckoning the ore at a certain value. These men take tribute for a certain time, and if they are fortunate they make money fast, and, although many have tried that mode, there are none of them dissatisfied with such species of payment, which shows the advantage obtained in mining, where the ore is near the surface, instead of being hundreds of feet beneath it.

The Wheal Watkins Lead Mine belongs to Mr.

Watkins, of Worthing, and has now been at work for about four years. The ore from this mine is valuable, consisting of many varieties, as galena, steel grained, and some of it strongly coloured with carbonate of magnesia. The analysis is as rich as that of the lead from the Glen Osmond, which it adjoins; and the situation, like the Montacute, is admirable for getting rid of the rubbish by throwing it from the mouth of the adit to the valley beneath.

P. Peachy, Esq., is agent for this valuable mine, and he has been so fortunate as to discover a fine lode on a section belonging to himself. Lead is found in different parts of his section, and, on excavating the side of a hill to enlarge his dwelling, a fine vein was broken in upon, and the whole hill is evidently intersected by minerals. These are a few of the principal mines either of lead or copper.

The whole of the range running from the north to the south, called the Backstairs Range, certainly abounds in mineral wealth, and nearly all the parts where minerals are found are not composed, as might be expected, of barren and otherwise unprofitable land, but are intersected by verdant valleys and gulleys, in which are abundant supplies of water and food for cattle, and timber for the use of the mines, and for fuel for the labourers. The hills are seldom, I may say never, so rugged and precipitous as to make cartage difficult; and where they are rather too bad for the labour to be profitable, a circuitous route may be adopted.

The mode of carriage is by bullock drays, which being made strong, will take from one and a half to

two tons; they are drawn by from six to eight bullocks. When on the level plains this load is not too great, especially if the team have been properly fed; but so many cattle are congregated around some of the mines that the supply of food is small; and in no long time, these animals, if not superseded by steam, will have to be fed on hay or straw carted for them to the place. In my opinion it will pay soon to construct railways, cutting the country in different directions, and then with plenty of ships waiting to receive the ore, the colony will rapidly go ahead. The subject of railway communication has often been broached in the colony, and a company is formed for the purpose of making a railway from the port to the town.

There is no occasion to form an expensive line, like the stupendous works seen in England; but the American plan may be followed, and the iron tram-plates laid upon sleepers of wood, and this at a comparatively small cost, for almost no levelling will be needed on that line.

Many companies have been already established for the purpose of working the mines in Australia, but there is still an immense field for other speculators who are desirous to win prizes. The chief of the existing companies are as under:—

	£
Australian Mining Company, formed in London, with a capital of	400,000
South Australian Company, formed in Adelaide .	12,000
South Australian Mining Association . . .	12,000
Montacute Mining Company	1,550
Glen Osmond Mining Company	30,000

	£
Kapunda Mining Company	30,000
Victoria Company	1,200
Grand Junction Mining Company	21,000
Burra Burra Company	12,320
Adelaide Company	10,000
Wakefield Company	1,000
Greenock Creek Company	1,000
The Angas Mining Company	30,000
Princess Royal Mining Company	10,000

The price of shares in some of these, as mentioned in the Adelaide papers of Nov. 1846, are as follows :—

	Shares.	Prices.
Burra Burra *	2464	£105 0 0
Adelaide	2000	9 10 0
Victoria	600	2 0 0
Wakefield	500	2 17 6
Greenock Creek	200	12 0 0
Grand Junction		30 0 0
Princess Royal		250 0 0
Poonawurta		10 0 0
Paringa		30 0 0
Royal South Australian Company, 200 per cent. on the deposit.		
South Para		50 0 0

The colonists have frequently been deceived by accounts of the discovery of coal in different parts; at one time a large seam was reported on the banks of the Murray River, within fifty miles of Adelaide; this was most likely a false report. Again, the locality was fixed at four miles from town, but that

* Twenty-two months after this mine was opened the company paid up 200 per cent. upon the entire outlay.

has not come true any more than the former. Coal was found on the coast near the Ougaparing River, and after being shown about, and the part explored by the government, it was found that the pieces had been washed on shore, having been thrown overboard from some vessel. A reward of 100*l.* has been offered to any person who shall find this precious commodity; but the efforts hitherto have been unavailing.

About five years since, some land belonging to H. Kemmis, Esq., of Yankalilla, and adjoining his house, was ploughed up for the purpose of growing wheat or other grain; and after ploughing, a shepherd, passing over the ground, picked up a piece of coal about as large as a quart pot, and carried it to Mr. Kemmis to know what it was. It was instantly perceived to be coal, and the man went for more, and he found two or three other pieces close to the same spot. Many persons saw them, and they were burned to show the quality; but since that time no more has been found on the surface, and no excavations have been made with a view to discover the shaft. This is much to be regretted, for the land has every indication of that substance, and is pronounced by competent judges to be a likely situation for coal. Two miners who had never been in that part before, or heard any account of the finding coal, on passing the place were greatly struck by its appearance, and the one said to his fellow traveller, "If there be coal in any part we have passed through, it is there," pointing to the plot on which some had been found as stated above. The formations observed near coal

in other places, are also seen here, as recent limestone, red sandstone, granite, and also the clay called fire-clay, and a great abundance of ironstone and rich iron ore.

When Captain Grey was governor, he thought the matter so important that he offered to send a party of men to sink a shaft or two; but this was not done because shortly afterwards he was required to proceed to New Zealand.

A coal mine would be of greater value at present than either a lead or copper mine, and would enable the ore to be smelted in the colony, thus causing a new trade, and saving at least one-third in freight alone, by enabling the colonists to ship pure copper instead of copper ore.

The discovery of smelting by electricity is important to all miners, especially in a country where no coal is to be purchased, except at prices too high to make it available for the purposes of fusing the ores; and therefore I have no doubt that such an improvement in the system will be hailed with delight by the proprietors of mines in South Australia, and no time be lost in testing its capabilities. There is little question that if these mines succeed, as there is every appearance of their doing, the price of copper will be reduced one-half, especially if the colonists smelt their own ores by electricity, instead of sending them in their rough state to Swansea. In this case, as one of the London papers says, "the cost of copper will be materially reduced; and it will become necessary for the mint to take some steps to prevent, not the issue

of spurious coin, but the competition of illicit manufactories of genuine copper, which the great profit to be realized will, in spite of penalties, call into existence."

The following extracts from a report published by the South Australian Company, will be found interesting, as showing the present state of the colony. It is dated 30th June, 1847: "In regard to these lands (meaning the mineral lands purchased by the director in Australia), the board has thought proper to proceed with great caution. Such a purchase not having been anticipated, the instructions previously sent to the colonial manager did not, of course, embrace the working of any mines. Nor, on the other hand, could the directors, with their necessarily defective information, enter into any engagements with such parties in this country as applied for sets of these lands. The disadvantages arising from these causes, however, are only temporary. The principal one is, that the quantity of ore received since the time of the last general meeting has been less than was then expected. The extravagantly high wages paid at first for mining labour also limited our manager's operations, while the facility of obtaining ore at first experienced did not continue, but was succeeded by hard ground, which required to be worked through. The wages have fallen considerably of late, although still very favourable for the industrious miner.

"During the year we have received about 300 tons of ore; of these, about 200 tons were sold at Swansea, so recently as on the 24th instant. The general

average price has been about 15*l*. A considerable portion of the ore would have brought a much higher price had it been sold by itself; but as the whole had been obtained near the surface of the ground, a good deal of earthy matter and inferior ore had been sent, which, of course, reduced the average. Our agent at Swansea, however, says in his letter of the 24th instant, 'The general opinion of all practical men that have seen these ores is, that they will increase in produce (that is, in richness) as they go down in depth, in a similar way to other South Australian ores,' which he mentions. This opinion is in perfect accordance with the accounts received by the board from Mr. Giles, the manager in Australia."

By the last overland Mail, they received advices from him to 20th March, from which they make the following extracts—"I left the mines yesterday, and feel much satisfaction in saying, that they never looked so well as they do at the present: the lode in the Kangaroo shaft, at a depth of thirteen fathoms, is twelve feet wide; it is now fourteen feet in length, and the captain computes that every fathom sunk by these dimensions upon the lode will not yield less than from thirty to forty tons of ore. There has been a great improvement within the last few days, and one of our steadiest miners, lately arrived, who has been at work in the Wheal Maria, in Devonshire, up to his departure, declares that he saw no lode in that mine that would yield an equal quantity of ore per fathom with our lode, the Kangaroo. The workings in the other shafts are also improving. We have now one hundred tons of ore on hand. The South

Australian Company may lease to five or six companies blocks of land on which there are rich stones of ore cropping out upon the surface, say from fifty to one hundred acres each. These would not interfere with our present Kanmantoo operations, which are all on one hill, on an area of one hundred acres."

Besides the mineral lands in the Mount Barker District, two other sections, at least, of the company's lands, selected solely for their superior agricultural properties, contain copper ore. From one of these, in Lynedoch Valley, a small lot of 6 cwt. was sold at Swansea, on the 24th instant, at 17*l.* 16*s.* per ton—in regard to which our agent there reported "it a very pretty sample of ore; it embraces all the favourable appearances that a miner could wish for, and indicates great prospects of abundance of copper." The colonial manager is of opinion that the lodes found in that section run through the company's property there, which amounts to 4000 acres.

The foregoing statement of labour being at so high a price, is substantially correct, and has been the cause of the total suspension of work in more than one mine; but as emigrants continue to arrive, this will obtain its level, though the price will never be so low as not amply to remunerate the workman. At all the mines where work is carried on, good and substantial dwellings are building, and every inducement is held out to the industrious to render their mode of life comfortable and pleasant. The cottages are mostly of stone, and in many places plots of ground are offered to those who will take the trouble of cultivating a garden.

Provisions are either sold at stores kept by tradesmen, or else are given out at a fair price by the masters; in this way also, all kinds of ready-made clothes are obtained, and there is, therefore, no occasion for the men to be constantly leaving their work, to provide the necessaries of life for themselves and families.

I have never heard any miner (who was a steady and industrious man) wish that he had not emigrated; and many have good reason to be satisfied, having, by their labour, become comparatively independent men, possessed of land and houses, cattle and sheep, and other property. This is, indeed, the case in other countries, too; but in none with which I am acquainted are the inhabitants blessed with a finer climate, or in the way of better treatment, than in South Australia; and I advise all who are willing to work and wish to improve their condition, to endeavour to obtain a passage out, either with their own cash, or through the emigration fund.

This colony will become a wonderful place for wealth and commerce; whoever has observed its late amazing rise through the impetus of the mines, will have full faith in the future of South Australia. Other countries are possessed of valuable minerals, but too often these exist in mountainous and almost impassable ranges, where the cost of carriage is greater than the value of the ores. As Mr. Dutton observes, "In South America it is a well-known fact, that thousands of tons of ore are lying at the mouth of the mines, without the means of bringing them to the coast, except at a ruinous expense; the mining

districts there being so mountainous that the only available transport is by mules." This is never the case in South Australia; for, as mentioned before, there is always some means of obtaining a very passable road without going to any great expense. Of all the sections where minerals have been found, there is not one, that I am aware of, where the making a road has been absolutely necessary. The Montacute Mine is about the worst off in this respect, as it is separated from the level plain leading to the port by a steep range. This, however, is not impassable, as many tons of ore have been already carted over it; and one person has offered to make a good road, and cart 500 tons of ore, for the sum of only 500*l*. This fact must be enough to convince any person of the nature of the country; and if this were not enough, the road to the Great Burra Mine is quite sufficient in itself to prove it. In the official report of the gentleman who surveyed this tract of land, there is this very convincing remark—"The road from Adelaide to these mineral hills (about 90 miles) is, for the most part, over level or gently undulating country, opposing no obstacle to the progress of heavy carriages." These facts (the abundance of minerals and the easy carriage of the ores to a safe port) must show that there is no drawback to the prosperity of the owners of the land, but the inadequate supply of miners and other labourers; and, if they were extensively circulated, I think that there would be little wonder if the emigration offices were quite besieged by applicants, instead of having, as at present, to offer induce-

ments to them to leave this land of starvation to many, to seek a home where every one can get a sufficiency of wholesome and substantial food. It is a fact, that there is a greater difficulty for a traveller to pass a station out in the bush, without being pressed to eat of the owner's abundance, than there is here for the poor to obtain work and get the means of buying food. Notwithstanding this, men are not to be obtained in South Australia to labour. In some of the colonies, the labour is paid frequently in produce, instead of being able to take his earnings away to spend as he likes. This is not the case in South Australia, where money is circulated either in hard cash, or bank notes that are as good as gold; and, as labour is scarce, the masters soon find out, that if they do not pay their men fairly, and at the proper time, they may work themselves, for they will get no man to help them; and this makes the masters more punctual and the men satisfied.

Miners can always obtain as much as 6*s*. per day, and their rations will not cost them more than from 9*d*. to 1*s*. These, if found by the masters, consist (per week) generally of the following scale :—

From 10 to 12 lbs. of meat, either beef or mutton.
10 „ best flour.
2 „ sugar.
¼ „ tea.

These articles can be bought by the masters at about 12*l*. per annum, including the cartage; the food being cheap enough to satisfy any one, and the quality no epicure need grumble at. I do not

meän to say, that the men will obtain the best, if they do not look after their rights; but the good is so little dearer than the inferior, and constant complaints on the part of the men are so unpleasant, that every master finds it to his interest to commence and persevere in one undeviating course, and make all share alike in quality, which saves much trouble.

I have seen curious scenes among ignorant and selfish men, who had been accustomed to the plainest food in England, and who, after a week or two in South Australia, would turn up their noses at the best meat, and ask if that was fit for a Christian? What could any one do but pity them? I remember one man, with his fellow-labourer, shearing for a gentleman, who was determined that no one should complain, and who, as I saw, had provided his workmen with cold roast and boiled meat, eggs, good bread, fresh butter, tea and coffee with cream, for their breakfast; this, one would say, was good enough; but complaints were made about one thing or the other, and the fresh butter was used to grease the shoes of the party. Any person who was acquainted with the liberality of this gentleman, would know that every article on the table was of the best. So much for the rights of master and man. I only mention this one circumstance to show that, whatever is done for some people, they will never be satisfied.

Such is the large number of mines already discovered, and such the rapidity with which the discoveries increase, that no scarcity of work for the

labourer need be apprehended for many years. In consequence, also, of the quantity of men employed at the mines, either as miners, builders, carpenters, or blacksmiths, and of the amount of common labourers, with their wives and families, the consumption of food is great, and this improves the prospects of the farmers and graziers, and indeed of all the classes that have to provide the necessaries and comforts of life to these large and increasing bodies of workmen.

It is not requisite that persons emigrating should be possessed of money or property to cause them to be a benefit to the country; for the poorer classes, those who cannot obtain work here, many who are kept by the parish, or in the workhouse, all, indeed, who are strong and hale, but, above all, willing to put their shoulder to the wheel—all these may be of service to the state. They are the class in demand; and such men, who have been sent out to relieve the parish of the expense of keeping them, would now be able to pay towards keeping their brethren, if there were any necessity in that land of plenty. There is no fear of overstocking the country with superabundance of labourers; 10,000 souls could be provided for, and dispersed over the country, either as small farmers or labourers, within the next twelve months. This may appear large for a small colony; but out of the number not more than 4,000, at most, would be able-bodied men or women, and the rest children. Boys are in great request at certain times of the year, to mind lambs for the shepherds, look after cattle, and many other jobs, for which it does

not pay to provide men. The mines, also, would find employment for many, and the females would be instantly engaged as domestic servants.

The Burra Burra Mine is believed to be the largest, and certainly, for the short time it has been worked, is the most productive, in the world. On the 16th of April, 1845, a body of the Adelaide citizens scraped together the sum of 2000*l.*, and formed themselves into a company called the Adelaide Mining Company, in order to acquire a portion of the mineral lands that were at that time rapidly being discovered, and which, without a company possessed of a sufficient capital, would undoubtedly have fallen into the hands of colonial and English capitalists, and then the working and management of them might have been conducted in a manner little to the benefit of the community generally. These were eventually increased by others who could afford larger sums, and the consequence is, that they have become possessed of the great Burra Burra, which, containing 10,000 acres of land, cost the company 10,000*l.*; 20,000 acres were purchased in a block; but, to obtain this special survey, it was found expedient that another mining association should coalesce with the original company, and each giving 10,000*l.*, purchase the block, and afterwards divide it by lot. This was done, and the immense mineral lands known as the Burra Burra Mine, fell to the lot of the original company. The company possessed of the remaining half, and known by the name of the Princess Royal Mining Company, has not been so fortunate, but has received enough encouragement to

continue working, and there is little fear that their portion will be immensely valuable. The Burra Burra is situated about ninety miles from Adelaide, beyond the northern boundary of county "Light," in latitude, 33° 40′ south, and longitude, 139° 8′ east, bearing from Adelaide north by east. The company set to work with only 2000*l.* as working capital, and in the space of three weeks from the purchasing the mine had raised two hundred tons of what was said to be a pure red oxide of copper. They have now built a village, containing, in October, 1846, four hundred inhabitants; have nearly completed smelting works; have sunk to the depth of one hundred and forty-four feet, and in length, measuring all the shafts and galleries, one mile and a half. They have raised, in one year, no less than 7,200 tons of copper ore, worth, on an average, at least 25*l.* per ton, equal in value to 180,000*l.*, at a cost, including all expenses of preliminary charges, and also buildings and improvements, of 16,624*l.* I insert the report of the association, which will, I trust, prove interesting.

"SOUTH AUSTRALIAN MINING ASSOCIATION.

(*Established April 16th*, 1845.)

AT the half-yearly meeting of the above association, held at the 'Auction Mart Tavern,' Hindley Street, Adelaide, the 21st day of October, 1846, Charles Beck, Esq., Chairman, the following report of the Directors was received and approved, and ordered to be entered on the minutes.

The Half-Yearly Report of the Directors of the South Australian Mining Association to the Scripholders at the General Meeting, held the Twenty-First Day of October, 1846.

In submitting an account of the transactions of the association for the past six months, the directors are happy to have it in their power to congratulate the scripholders on the very satisfactory results which have attended their operations during that period, and on the present prosperous state of their affairs.

Subjoined are returns containing the particulars of the quantity of ore raised at the Burra Burra Mines, by which it will appear that the increase of the ore intended for exportation during the last six months exceeds by nearly ninety per cent. the quantity produced during the preceding half year, making the total quantity raised from the commencement of the mine (twelve months since) seven thousand two hundred tons; and a considerable improvement has taken place in the quality, the red oxide, malachite, and the richest descriptions of ore now being predominant. These returns will show that there has been a decrease in the quantity of ore carted during the last six months, which arises from the four winter months intervening during that period, when the roads are almost impassable, and not from any diminution in the number of drays. The directors do not apprehend any difficulty attending the carting of the ore, as there are now nearly four hundred drays employed for that purpose; and,

during the last week, one hundred and seventy-four tons were delivered at Port Adelaide.

The mine never looked so promising as at the present time, there being abundance of ore in sight; and, during the last month, eleven hundred tons were raised, with every prospect of a continued large supply. The lodes generally have been discovered farther into the survey, and the workings are extending southwards. The present openings or workings consist of twenty-nine shafts and winzes, the deepest being one hundred and forty-four feet (at which depth a lode of very rich ore has recently been cut), and they amount, in the aggregate, to one thousand, eight hundred, and sixty feet in depth; also, seventy galleries or levels, the united lengths of which measure seven thousand, nine hundred, and ninety-two feet, or rather more than a mile and a half.

Up to the present time, the directors have not received advices from England of the positive worth of the ore, beyond the general opinion that it is considered very valuable; but they are expecting account sales daily. Two of the first shipments had arrived, and created some interest.

The directors regret the unavoidable delay in the smelting works, which has been owing to the difficulty of getting masons, and the pressing necessity for completing the cottages for the men. The building is now, however, far advanced towards completion, and they hope to be very shortly at work.

The township of Kooringa is progressing rapidly; in addition to the cottages belonging to the association, several allotments have been let to shopkeepers

and others, who have erected some very creditable buildings.

The rents from these allotments, and other properties, at present amount to upwards of two hundred pounds per annum. A paddock of one hundred and sixty acres has been fenced in, and an eighty-acre section has been let for a dairy farm.

A subscription has commenced among the persons engaged at the mine, and the residents at Kooringa, for the erection of a building to be used as a school-house and place of worship, to which the directors have promised assistance, and hope shortly to commence the building.

Annexed is a statement, or cash balance-sheet, of the affairs of the association to the 30th September last. The directors, however, refrain from making any estimate of the value of the association's property until they receive returns for the bulk of the ore already shipped, and beg to observe that the items at their debit, 'Sundry Creditors—7,837*l.* 7*s.* 6*d.*,' consists principally for wages and expenses on the greater part of the ore at present at the mine, but against which they could not draw the usual advance made on shipment, or there would have been a balance in their favour. The amount 16,624*l.* 2*s.* 2*d.* (being the entire cost of the working of the Burra Burra Mines), when compared with the expenditure during the first half-year, and the quantity of ore raised, will be found to have increased, but is attributable principally to a large outlay during the winter months, for discovering work, in order to facilitate the raising of the ore at a time when it can be carted

and shipped, the advantages of which outlay have already been apparent.

The consideration of a deed of settlement has engaged the directors' earnest attention, and they will, subject to the approval of this meeting, cause a deed to be prepared, and lay the same before the scripholders for their consideration, either at the next annual meeting, or at some earlier period.

As it must be some time before the proceeds of the greater portion of the ore shipped comes to hand, the directors do not expect that they will be in a position to recommend a dividend before the April meeting; but, should the state of their funds warrant it before that period, the directors will call a special meeting of the scripholders for that purpose.

In conclusion, the directors look forward to the forthcoming six months with the hope that the result of the business at the end of that time will be as much in advance of the last half-year, as that exceeds the first six months, which they confidently expect will be the case.

CHAS. BECK,

Chairman of the Board of Directors.

Adelaide, Oct. 20, 1846.

RETURNS OF ORE REFERRED TO IN THE ANNEXED REPORT, CALCULATED AT TWENTY-ONE CWTS. TO THE TON.

RETURN of the Stock of Ore on hand, the Produce of the Burra Burra Mines, at the Half-year ending 28th March, 1845, with the Quantity raised since that Period to the 30th September, 1846; showing the Quantities carted from the Mines, shipped, and remaining on hand.

1846.	ORE FOR EXPORTATION.	tons.	cwt.	qrs.	lbs.	1846.	ORE FOR EXPORTATION.	tons.	cwt.	qrs.	lbs.
March 28	On hand at Port Adelaide	590	15	0	20	Mar. 28 to Sept. 30	Shipped to England for sale	1256	4	1	14
	On the road to do.	118	16	0	7	Sept. 30	In course of shipment, per *Brechin Castle*	262	1	1	13
	On hand at the mine	66	0	0	0		On the way to the port	162	5	2	21
	Total stock on hand	775	10	0	27		On hand at the mines, ready for carting	2849	9	0	0
Sept. 30	Raised since 28th March last	3754	10	0	21						
		4529	20	1	20			4529	20	1	20
1846.	SMELTING ORE.					1846.	SMELTING ORE.				
March 28	On hand	723	0	0	0	Sept. 30	On hand at mines for smelting	1462	0	0	0
Sept. 30	Raised since 28th March last	739	0	0	0						
		1462	0	0	0			1462	0	0	0

RETURN of the Quantity of Ore raised at the Burra Burra Mines, and from thence carted and shipped during the Half-years ending 28th March and 30th September, 1846, respectively, showing the increase or decrease thereof respectively.

	Half-year ending 28th March, 1846.				Half-year ending 30th Sept., 1846.				Increase.				Decrease.			
	tons.	cwt.	qrs.	lbs.	tons.	cwt.	qrs.	lbs.	tons.	cwt.	qrs.	lbs.	tons.	cwt.	qrs.	lbs.
Ore raised for exportation . .	1983	17	1	3	3754	10	...	21	1770	13	2	18	...	...	...	...
Ditto for smelting	723	...	...	...	739	...	...	...	16	...	...	...	...	...	...	...
Carted from the mines to the port	1799	1	...	24	927	11	2	7	...	...	...	...	871	9	2	7
Shipped to England for sale . .	1197	14	3	18	1256	4	1	14	58	10	1	24	...	...	...	...

RETURN showing the entire quantity of Ore raised at the Burra Burra Mines, from the opening on the 29th September, 1845, to the 30th September, 1846, inclusive, with the quantity carted from the Mines to Port Adelaide, and from thence shipped to England for sale, and otherwise disposed of:—

1846.	ORE FOR EXPORTATION.	tons.	cwt.	qrs.	lbs.	1846.	ORE FOR EXPORTATION.	tons.	cwt.	qrs.	lbs.
Sept. 30.	Raised during the twelve months	5738	6	1	24	Sept. 30.	Shipped to England for sale	2453	19	1	4
							Sold at Adelaide	9	15	...	14
							Smelted on trial and samples	...	19	...	...
							At Port Adelaide in course of shipment per *Brechin Castle*	262	1	1	13
							On the road from the Mines to the Port	162	5	2	21
							On hand at the Mines ready for carting	2849	9		
		5738	6	1	24			5738	6	1	24
	SMELTING ORE.						SMELTING ORE.				
Sept. 30.	Raised during the year . .	1462				Sept. 30.	On hand at the Mines for smelting	1462			
	Total	7200	6	1	24		Total	7200	6	1	24

CHARLES BECK,
Chairman of the Board of Directors.
Adelaide, September 30, 1846.

HENRY AYERS, Secretary.

Statement of Account referred to in the annexed Report.

The Directors of the South Australian Mining Association, in account with the Scripholders from the establishment on the 16th day of April, 1845, to the 30th day of September, 1846, inclusive.

Drs.	£	s.	d.	Crs.	£	s.	d.
To capital stock	12,320	0	0	By landed property, with improvements	13,663	4	3
To rent of buildings, &c.	66	13	0	By wages and sundry accounts connected with the working of the Burra Burra Mines, including cost of fixed machinery, tools, implements, stores, &c.	16,624	2	2
To drafts against 2453 tons, 19 cwt., 1 qr., 4 lbs. of ore shipped to England for sale	20,624	0	2	By cartage of ore	7,857	11	2
To sale of copper at Adelaide	3	5	0	By shipping expenses and Port agency on ore exported	624	18	6
To sale of ore at ditto	209	11	6	By freight and charges on ore shipped via Sydney and Van Diemen's Land	245	19	0
To profit and loss, being premium on eight shares sold, &c.	134	9	4	By discount and interest	1,182	4	6
To sundry creditors	7,837	7	6	By charges, being expenses of establishment	741	0	5
				By office furniture	79	6	7
				By sundry debtors	77	11	9
				By balance cash in hand	99	8	0
	£41,195	6	4		£41,195	6	4
To balance cash in hand	£99	8	0				

Chas. Beck, Chairman of the Board of Directors.

Adelaide, 30th September, 1846. Henry Ayers, Secretary.

We have compared the entries in the books of the South Australian Mining Association, for the half-year ending 30th September last, with the vouchers produced before us, and certify that the above account is a correct abstract of the balances at the close of that period.

October 17, 1846. Frederick Wickstead, John Brown, } Auditors.

Rundle-street, Adelaide, 22nd October, 1846. HENRY AYERS, Secretary.

O 2

The following is written by a gentleman resident in Adelaide, who, accompanied by some others, paid a visit to this part of the country, and his remarks are correct as far as I have had the means of judging. The party started from Adelaide in a covered van, which takes passengers to and from the mine, and a very good description is given of the nature of the country they passed through, and the different modes of obtaining accommodation whilst on their journey. Gawler Town, about twenty-three miles from Adelaide, is mentioned as a thriving town, where also 2400*l.* has been provided by the treasury for the building of a bridge over the Gawler River. The town contains several shops and a steam flour-mill, besides three good inns and many other buildings, with a church in the course of erection. From this gentleman's account there are public inns established every few miles; and besides those in Gawler Town, no less than eight others were either at that time finished, or nearly so.

There seems to have been no lack of company on the road: at the Sod Hut (a deserted station) they met with a great number of loaded drays from the Burra Burra, some of them containing from two to three tons each of green malachite ores, and drawn by eight bullocks, having the appearance at a little distance of huge loads of green vegetables going to market. A mile farther on they found several bullock drays and horse vehicles, drawn up for the night near the gipsy fires of their respective drivers or passengers. The next day they arrived at the mine, and the following extract shows that they were willing to observe as much as possible.

"On Sunday morning we took an early walk, and obtained a glimpse of the mine from the summit of an intervening hill, but were closely immured for the remainder of the day in consequence of incessant heavy rain. Early on the following morning our breakfast was cut short by the announcement that Captain Lawson was 'waiting to accompany us under ground,' at the principal workings; and having provided ourselves with subterranean *toggery*, we made a hasty but becoming toilet, and hastened to attend our kind conductor in his descent. The huge cargoes which have been shipped, the piles of ore we had seen at the port, the hundreds of draught oxen and laden drays we met in their progress to the wharf, the thousands of tons of ore around the workings, and near the intended smelting-house, their daily accumulations, and the reports of credible, unbiassed witnesses, had prepared us to expect much; but before we had passed through a single gallery, as the larger horizontal drivages or levels are very properly called, we saw enough to convince us we had commenced the examination of a mine incomparably richer and more productive than any mine of any kind we had ever seen in the United Kingdom.

"We passed through a succession of galleries and chambers, as the larger excavations are justly named (one of them being large enough to hold a congregation of a hundred or two persecuted Covenanters, and sufficiently lofty for the pulpit and desk which those simple but devout worshippers managed to dispense with). In our progress we had to ascend successive perpendicular ladders, with a lighted candle retained

between the fore-finger and thumb; afterwards to make descent by similar contrivances, and others much more rude; until in divers wendings, prostrations, twistings, turnings, climbings, clamberings, and examinations, we had spent nearly three hours under ground, and passed through or looked through the greater part, if not all the extensive subsoil operations which were thus correctly described in the last half-yearly report of the directors:—

"'The present openings or workings consist of twenty mine-shafts or winzes, the deepest being one hundred and forty-four feet (at which depth a lode of very rich ore has recently been cut), and they amount in the aggregate to one thousand eight hundred and sixty feet in depth; also, seventy galleries or levels, the united lengths of which measure seven thousand nine hundred and ninety-two feet, or rather more than a mile and a half.'

"Subsequent operations have not been without commensurate results, for we counted more than the number of shafts and winzes mentioned; and although we could not estimate the lineal admeasurement of the various levels, galleries, drivages, and excavations, the time it took us to traverse them, and our impressions of their extent, convinced us that 'the mile and a half' has ceased to be a sufficient longitudinal return. There are steps down to the first range of workings; and the passes, lines of communication, and ladder shafts, are so well contrived, that we had not often to trust our 'precious bodies' to the kibble and the rope. Past experience enabled us to 'draw' a pretty correct 'inference'

from what we saw, and to estimate (if it be possible) the value of the property itself; but we could not repress the expression of surprise and delight as the successive astonishing developments of mineral riches presented themselves or were exultingly shown us by some of the numerous miners employed.

"The Directors' estimate of the total quantity of ores raised in the twelve months ending on the 20th ult. was 7200 tons; but as, in calculating the small ores retained for smelting at the mine at 1462 tons, they were greatly below the mark, and have been raising largely ever since, the entire quantity produced within thirteen months may safely be set down at 10,000 tons. The prices obtained in the sales of Burra Burra ores at Swansea already show an average of something more than 23*l.* 16*s.* per ton; so that, even deducting 8*l.* 16*s.* per ton for carriage, freight, and charges, the mine may be said to have yielded value equal to at least *a hundred and fifty thousand pounds* estimated upon the ground (or 'at grass,' as a miner would say); and all this within the short space of thirteen months from the commencement. Nor is this large amount at all likely to be a maximum, for the malachite, red oxide, and other rich kinds of ore have become predominant; and as the mine is undoubtedly equal to the production of 300 tons or more per week of ores likely to yield a much higher average than heretofore, it is not difficult to foresee the immensity of future returns. The great importance of the operations at this mine, as beneficially affecting the trade and commerce of the

colony, may be judged of from the facts, that the sums already distributed by this one concern amongst our industrious settlers for carriage must have exceeded ten thousand pounds—those expended in wages and the various items of disbursement, twenty thousand—and the British or Colonial freights, which cannot be less than fifteen thousand.

"It affords us much pleasure to be able to state, furthermore, that not a single accident has proved fatal to any miner employed in the Burra Burra since the operations began; and it is due to the resident managers to add that every precaution is used and no cost spared in order to secure the ground, which is in some parts precarious enough to call for constant watchfulness. Stuhl timbers of solid gum, ten to twelve inches diameter, with stout head and foot pieces of large measurement, were being provided, without grudging, from an ample store of materials contiguous to the working shafts, which are respectively named after the several directors or principal shareholders.

"The productive hands are variously employed; some upon tribute—the highest proportion given being 3*s.* 6*d.* in the pound sterling of the value of the ores raised; the lowest 2*s.*; and others by the ton, for 'hard ore,' the prices varying from 18*s.* to 27*s.* 6*d.* The preparatory miners and labourers operate upon what is called tut work, or so much per fathom, or in specific jobs, or at per day, on owners' account, or in labour subsidiary to and chargeable upon the takers or contracting miners below. The

tributers seem to prefer prompt bargains with the resident authorities to any long suspense; and an instance of this occurred while we were at the mine, wherein a guess was substituted for 'the score and the tally,' and a hard bargain seemed to be driven between the respective parties, the particulars of which did not transpire until it had been wetted at Mr. Wren's, by the eight vendors; one or more of whom having overstepped the bounds of propriety and peace, which necessitated the interference of the doctor and the police, and during discussions upon the *casus belli*, the following fact leaked out, namely, that eight men had earned 375*l.*, or nearly five guineas per week each, during a period of nine weeks. We were informed that one man, a Cornishman, whose comrade had quitted him during his temporary absence from the mine, and who resumed his workings alone, cleared fifty pounds in two months. We could adduce other instances of as large or larger earnings, but we feel it our duty to refrain, because in a mine so very profitable, and one not unattended with personal risk to the *underground* workman, we think great liberality is called for, and are pleased to find that liberality is not wanting, although we found more evidences of prudential care, if not of tight dealing, than we were prepared to expect in a concern, as yet so young, although so gigantic, and situated in a district so far removed from ordinary social facilities and the means of control.

"We learned that a census had been taken a day or two before we reached the mine, the following

being the respective numbers employed, or resident in the township, or in and about the Burra Burra :—

238 men
70 women
160 children.

Total 468

Besides these, there are sawyers, charcoal-burners, carters, and others, to the number of 50 or more, employed at various distances from the mines; so that the total population of the Association's district probably amounts to 550 souls.

"We can hardly imagine a more urgent call for the exercise of missionary zeal than that which forces itself upon the attention when contemplating this new and mixed community. It wants not only an exemplary schoolmaster and schoolmistress who would find themselves sufficiently, if not liberally paid, but a zealous minister of religion, agreeing with the pattern presented by Saint Paul, namely, 'blameless, vigilant, sober, of good behaviour, given to hospitality, apt to teach, the husband of one wife,' and that wife 'no slanderer, but discreet and faithful in all things,' assisting her husband to 'rule well their own household.' The residence of such a couple would be likely to work wonders at Kooringa; and as there is no want of liberality amongst the well-paid operatives, it behoves the directors to take means without delay, for supplying the moral and spiritual wants of the young community, which the Association has called into existence.

"Samuel Stocks, jun., Esq., the resident director,

is very generally designated 'the Governor;' and his residence, called by some the 'Government House,' has a substantial stone gable and chimney, which reminded us of the fact that the first Government House in the province, built by the *Buffalo's* men for Governor Hindmarsh (in warm weather, we presume), was begun, if not finished, without such a useful appendage. It would be difficult to find within the province a gentleman better qualified or more disposed to adapt himself to the onerous and important duties he has undertaken. In the execution of these multifarious duties, and his measures of conciliation and arrangement, he is as markedly successful as he is generally respected.

"The surgeon, although well paid by direct stipend and monthly or occasional contributions, has evidently no sinecure, and finds it necessary to hold himself in constant requisition, as he appears to do with all conceivable suavity.

"The mounted police force is only three in number, consisting of a serjeant and two constables. Their conduct is excellent, and their temper, management, and promptitude most praiseworthy.

"The township of Kooringa is principally composed of substantially built houses, constructed of stone quarried within the township, and flagged with an excellent material, raised (we believe) upon the property of the association, although at a distance of some few miles. Altogether, the local adaptation and facilities for the formation of a township are all but of the first order; and that Kooringa will be a

very thriving place there can be little doubt. At first sight, the paucity of wood, and the lack of a visible supply of water appeared to militate against domestic comfort; but when we learned that the employees of the association were supplied with water at sixpence per week, and wood at the like easy rate, we became convinced that in these, as well as other respects, there was more than met the eye.

"An accurate weigh-bridge has recently been put down at the mine, and every precaution seems to be used to produce a just impression of fairness 'between master and man.' By the present monetary arrangements the labourer can purchase his weekly supplies wherever he can do so to the best advantage; and although the profits of the Kooringa storekeepers are still good, it is said they have ceased to be at all 'exorbitant.' Good stonemasons or wallers are much in request at 7*s.* per day, or 4*s.* 6*d.* per cubic yard, finding their own materials, and masons' labourers at 5*s.* Additional carpenters might find ready employment at 35*s.* to 45*s.* per week according to ability. Sawyers get 10*s.* 6*d.* per hundred. The price of carriage to the port is 2*l.* 15*s.* per ton of 21 cwts., and although this seems low enough for a hundred miles of carriage, over an unmade and sometimes 'yielding' road, there is no lack of carriers, inasmuch as the *average* Monday presentation is nothing short of sixty drays and three hundred and sixty bullocks. The charges for up-carriage of stores and charcoal are also considerable, the stock on hand of the latter being sufficient to fill a charcoal store of 150 feet in

length, by about 27 in breadth. The smelting house is a most substantial and handsome building, measuring about 105 feet by 35 feet.

"We closed our observations in the interesting neighbourhood of the Burra Burra with an examination of a valuable property contiguous to the great mine, and called 'the Sydney Company's,' at which, for no good reason that we could possibly discover, little had been done, and then prepared, not without regret, for a departure on the morrow.

"The 100 miles of unmade road by which we reached the Burra, and the one which leads the explorer forty or fifty miles through 'the endless plains' beyond, most strikingly exemplify the extraordinary natural facilities for communication and colonization in South Australia.

"At noon, on Tuesday morning, we set out for the southern portion of the Special Survey of 20,000 acres, on which is the Princess Royal mine, another rich mineral pie like the Burra Burra, but with a thicker crust. About thirty men are employed, and something more than two hundred tons of good ores have already been sent from this mine; and it appeared to us that, with a little more spirit and perseverance, two thousand tons first, and then twenty thousand tons might follow. We inspected as many of the shafts as our time would permit, but especially one that had been sunk upon the original 'monster lode,' upon the margin of a forest of stunted pines. The fact of possession of abundant treasure is decisive, although it is not so instantly tangible as that at the Burra Burra. A beautiful lawn was pointed

out to us as the intended site of the Princess Royal Township, which will have the advantage of a sufficient supply of excellent water from a neighbouring spring. The present snug establishment is pleasantly located upon the Burra Creek.

"The route from Kooringa to the Princess Royal and thence to the southward, crosses and traverses the creek, or rather its bed, for several miles, and at length reaches an abrupt but comparatively insignificant ridge, called 'the Saddle,' through which a passage has been (sparingly) cut, and other neighbouring 'easements' effected. Then follows a flat, which is rather too sweepingly called 'the swamp.' We had the curiosity to pace enough of this flat to ascertain a length of two miles of absolute level, or very easy gradient; and coupling this observation with what we noticed in other parts, we can venture to say fifty miles of the hundred mile route from the Burra Burra to Port Adelaide, presents facilities for railroads which are scarcely to be surpassed by any in the world, either for ready capability of formation or cheapness. We do not mean a railroad adapted for high speed, and to be attempted only by a large amount of imported capital, but a work capable of continuous employment, and more diffusive and real in the benefits conferred upon the community than the present mode, astonishing as it is, can possibly be.

"We encamped for the night at 'Tothill's Gap,' where we found several drays going to and returning from the mines, a plentiful supply of water, plenty of fuel, and a remarkably 'dewy eve,' as our blankets bore testimony at day-break. At a quarter past five

we were again on the move, and, after seeing some good country and a large lagoon, passed through a forest of about seven miles across, having in its midst the 'Sawyer's Hut,' properly so called, and eke a place of refreshment; but we passed on to one of Mr. Dutton's sheep stations, on 'Tothill's Creek,' where we breakfasted heartily, and then made our way to the Light, which we crossed with difficulty at a point far removed from our upward crossing place, and, pursuing our way, passed by the wool shed of Messrs. Newland and Co., and arrived at Kapunda, time enough to take a first superficial survey.

"The Kapunda is a wonderful mine, as the returns already made and the mineral property on the ground sufficiently prove. The underground workings are for the greater part suspended in consequence of the insufficiency of the principal whim machinery for keeping under the water, and the non-arrival of a steam engine ordered from England by the proprietors.

"Sixty to seventy tons per week, averaging more than 20*l.* per ton in value, are even now sent from this very rich mine. Specimens of virgin copper in the laminated and foliated forms, as well as in amorphous masses, abound in this mine; and the kinds of ore produced afford a remarkable variety, comprising the gray sulphuret with green carbonate; produce 50 per cent or more. Black sulphuret with green carbonate; produce 23 to 60 per cent. Pale green carbonate; produce 26 to 48 per cent. Blue carbonate (hydrocarbonate); 20 to 30 per cent. Gray carbo-

nate with red oxide; produce 28 per cent. Dark green carbonate; produce about 30 per cent.; and some others of less value.

"The locality of the mine is highly rural, and the busy operations of man have made it picturesque. Among the sections purchased by the Grand Junction Company are those situated on the east, west, and north of Kapunda; and although the workings of the company have hitherto been unattended with profitable returns, it is evident, from what has been seen in the present workings, that due perseverance will not be unattended with success.

"Mr. J. B. Hack is the resident superintendent on behalf of the Grand Junction Company, and it is not an unmerited compliment to either to declare that the appearances of comfort and good management were nowhere more apparent than in their establishment and amongst the operatives.

"The single miners are provided with excellent board and lodgings at 10*s.* per week each.

"The buildings are judiciously planned, and calculated for durability.

"On the Kapunda section, we searched for and found some of those beautiful *débris* which first enlightened the mineralogical observer as to the value of the Kapunda property, and were able to draw conclusions highly favourable to some of the adjoining properties. The inn (which is much wanted) is now nearly ready for occupation on the southern side of the Light, and distant about a mile from the mines of the Kapunda district; and it is to be hoped that the

beautiful and available intervening country betwixt it and Gawler Town will not be long without its half-way house.

"On our return to Gawler Town we found the first annual races had commenced, and, as all the sporting details have already appeared in the provincial papers, we shall not attempt any partial recapitulation; but we cannot help expressing the feelings of delight with which we contemplated such a scene upon a naturally formed course, which required appropriation only from man and beast, and afforded a complete and commanding view of the performances of both, from the sides and summits of its steep and crescent-formed banks. The evergreen foliage of the trees, which marked the trending of the river on the opposite side of the race-course, completed the agreeable picture.

"The attendance, although not large, was greater than we expected to find it, considering the urgency of the claims upon every man's attention, and the paucity of leisure for any. The first novelty that attracted our notice was a 'motley fool's' exhibition, which riveted the attention of a number of natives, until the musicians of the German brass band struck up in a neighbouring tent, when our sable brethren showed their innate susceptibility of harmony by deserting the man of shreds and patches, and winning as well as uncouth grimaces, for the concord of sweet sounds which 'the tuneful nine' were so well qualified to produce. These German musicians are also miners, and as they will, in all probability, find employment together near Adelaide, we may calcu-

late on their affording us a new species of enlivenment for our annual or occasional festivities.

"Since our return we have seen a gentleman who enables us to speak with some degree of certainty of those things in our mineral world which we have not seen for ourselves, and of which we shall make brief mention. Mount Remarkable copper, he says, exhibits present abundance, and the promise of all that can be desired in quality. The mineral riches in the district of the Emu Springs are described as almost indescribable; and the yielded treasures of the mines in the Mount Barker and other eastern districts, are said to be undoubted, and fully confirmatory of the best hopes of South Australia's friends."

On the 11th January, 1847, a valuable discovery was made on some lands close to the town. The extract is taken from the "Adelaide Observer." "Within the last few days a discovery has been made upon a section of land on the banks of the Torrens River, belonging to Messrs. Smith and Levi, which promises to open a new source of wealth to the colonists. The miners employed in exploring a vein of copper, accidentally struck upon a lode of galena, consisting probably of a spur from the main lode of that material. This ore has been found by Dr. Davy's assay to contain the enormous proportion of more than 600 ozs. of silver to the ton. The galena is accompanied with other varieties of lead and silver ore, and in appearance differs but little from specimens already common in the colony, except in the peculiar matrix in which it is inclosed. The following are the particulars of the analysis, as furnished

by Dr. Davy: The metalliferous portion of the specimen, separated nearly but not completely from its matrix, weighed 75 grains, and yielded 45 grains of lead, containing 1.33 of pure silver, or about 1¾ per cent. on the ore.

"This is at the rate of 627 ozs. avoirdupois to the ton of 20 cwt. The matrix contains no other substance of value, but deserves particular notice as being unusual, and probably indicating the same rich description of ore in other places."—*E. Davy.*

The richest galena hitherto discovered has yielded no more than from 12 to 18 ozs. of silver to the 100 lbs., whereas that just found produces more than 27 ozs.

It is unnecessary to remark upon this important subject, further than to mention the presence of silver in many of the lead mines at present in work, but in no other part has it been found in such quantity, or in a lode surrounded by the same peculiar matrix. The same arrival of papers has also mentioned the discovery of coal in two different parts, one at the Reedy Creek, the other on Kangaroo Island. Specimens from both parts have been brought to Adelaide, and are said to be the genuine article. It is to be hoped that the next arrival of newspapers will confirm this good report, as seemingly nothing but this is required to exhibit the resources of the country to perfection, and to amply repay the owners of the different minerals at present in work, or which hereafter will be brought to light.

A new survey of 20,000 acres is talked of at the head of Spencer's Gulf. Minerals are there found in

large quantities, and the miners sent to explore the tract report favourably of it. The locality is near Mount Remarkable, about twenty miles from the head of the gulf. The surrounding country was found strong and rocky, but highly picturesque, and, better still, abounding in superb pasturage; and, in fine, altogether splendid both for the farming and the mining interests. The distance from Adelaide is about 200 miles.

The following is a description of the various kinds of ore discovered in the different mines at present worked in South Australia. This description is extracted from the writings of Thomas Burr, Esq., Deputy Surveyor-General:—

Kapunda Copper Mine.—The principal ores from this mine are—the best varieties of sulphurets, as vitreous copper or copper glance, purple copper ore, gray copper ore, the black sulphuret of copper; and the blue and green carbonate of copper, which are generally mixed with earthy matter.

Burra Burra Copper Mine.—The chief productions of this mine are—the protoxide of copper or ruby copper ore, and the carbonate of copper. The protoxide is generally in veins of greater or less thickness, traversing the oxide of iron; some of the mixed specimens, from the Burra Burra Mine, are exceedingly beautiful. A rich ferruginous red oxide of copper has also been procured in considerable quantities. The sulphurets of copper are scarce.

Montacute Copper Mine.—Copper pyrites, generally variegated, is the principal ore from this mine. Carbonate of copper is also met with, and some of

the finest specimens of this ore are from the Montacute Mine.

Rapid Bay Copper Mine.—The ores of copper from this mine are similar to those from the Montacute.

Mount Barker Copper Mine.—The ores from this mine are—a red oxide, containing a small portion of iron and silica, and the blue and green carbonate of copper, generally earthy.

Copper mine about twenty miles N.E. of Mount Barker.—The only specimens that I have seen from this mine have been of a good kind of the sulphuret of copper, which was variegated.

Wakefield Copper Mine.—The carbonate of copper with iron ore, and the sulphate of baryta.

Glen Osmond Lead Mine.—The principal ores from these mines are the sulphurets, or galena, crystallized in cubes and granular, and the corneous lead ore, a murio-carbonate of lead.

Rapid Bay Lead Mine.—Galena, in cubes, and blue lead ore.

List of *Mineralogical* and *Geological* Substances already discovered in South Australia, and classified by Thos. Burr, Esq.:—

NATIVE GOLD.

NATIVE SILVER, since discovered.

COPPER.

Sulphurets of copper.	Gray copper ore.
	Gray copper ore, variegated.
	Pyrites, variegated.
	Yellow copper ore, purple and black ditto.

Oxides
- Black oxide.
- Red oxide, lamellar.
- ——— crystallized.
- ——— ferruginous and earthy.

Carbonates
- Green and blue malachite varieties.
- Blue, crystallized and compact.
- Chyssocolla or a silicious carbonate of copper.

Muriate of copper, compact and lamellar.

Arseniate of copper.

Lead.

Sulphurets
- Galena, crystallized in cubes.
- ——— granular.
- Blue lead ore, pulverulent.

Salts of lead — Corneous lead ore, a murio-carbonate of lead.

Iron.

Sulphurets
- Iron pyrites, crystallized in cubes.
- ——in pentagonal dodecahedrons.

Oxides
- Specular iron ore, massive, lamellar, and granulated.
- Brown hœmatite, radiated and fibrous, and compact.
- Bog iron ore, and other earthy oxides of iron.
- Magnetic iron ore, crystallized and massive *varieties*.
- Yenite.

Carbonate of iron. Phosphate of iron.

Manganese.

Oxides
- Black, fibrous, diverging, massive.
- Silicious oxide of manganese.

Earthy Minerals.

Quartz, in great varieties.
Flint in nodules, black (not the chalk flint).
Hornstone.
Woodstone.
Opal, in great varieties.
Jasper.
Calcedony, blue, botryoidal.

Calcedony, red, with opal.
Agate, red, blue, and moss.
Prehnite, *varieties.*
Garnet, red and black.
Cinnamon stone.
Angite.
Coccolite.
Hornblende.
Grammatite.
Actynolite, green and brown.
Amanthus, *varieties.*
Asbestos.
Rock wood.

ALUMINOUS.

Fibrolite.
Sappare, white and green.
Clay, *varieties.*
Pipe clay, white and pink.
Alum, slate and stone.

ALKALINE EARTHY MINERALS.

Schori, *varieties.*
Rubellite.
Beryl.
Epidote.
Talc, *varieties.*
Mica, *varieties.*
Felspar, *varieties.*

ACIDIFEROUS EARTHY MINERALS.

Sulphate of lime.
Fluate of lime.
Dolomite.
Bitter spar.
Carrara marble.
Marble, in great varieties.
Calcareous tuffa.
——— stalactites.
Silicious tuffa.
Wavellite, stellated.

ACIDIFEROUS ALKALINE MINERALS.

Glauber salts.
Chloride of soda.
Nitrate of potassa.

COMBUSTIBLE OR INFLAMMABLE MINERALS.

Sulphur, native, inclosed in vein quartz with iron pyrites.
Graphite or plumbago.
Bitumen.

GEOLOGICAL SPECIMENS.

Granite, *varieties.*——Syenite.——Porphyry, red and green.

STRATIFIED ROCKS.

Grauwacke slate.
Clay slates, *some good for roofing.*
Flinty slates.

SANDSTONES AND SILICIOUS ROCKS.

Quartz. | Sandstone, in varieties.

CALCAREOUS ROCKS.

White marble, similar to Carrara.
Marble, white and veined.
——————— gray.
——————— pink.
Limestone, in varieties, including arenaceous limestone with fossil remains of shells partly bivalve.
Calcareous sandstone.

May 14, 1846.

A company has been formed in England, and incorporated by royal charter, named "The Indian and Australian Royal Mail Steam Packet Company." The capital of this company is one million sterling. If it succeed in its objects, the greatest good will accrue to those distant colonies. The export and import of goods will be not only greater, but much more rapid, than at present, and the facilities of communication will be vastly improved. It is reckoned that the whole distance from London or England to Singapore, thence to Port Essington (*viâ* Batavia), and from Port Essington to Sydney, will not take more than sixty-four days and a half. (The distance is 12,790 by this route, and the daily quantity to be accomplished 199 miles.) The coal stations are convenient; excellent coal from the pits at Newcastle, New South Wales, can be put on

board there at 7*s.* to 7*s.* 6*d.* per ton, and the freight to Port Essington about 20*s.* to 22*s.* per ton; a coal depôt would thus be formed at a rising British settlement, at a cost of 27*s.* to 30*s.* per ton. Lombock or Batavia can be supplied with coals from our new settlement of Labuan in Borneo, or from Calcutta. There is no doubt that such an extensive system of rapid communication will be a decided improvement to the Australian colonies, the whole of which are embraced in this undertaking. In a steam-boat the room for stowing bulky goods is less than in most sailing vessels; this would prevent the steamers from taking much of such a cargo as wool, with which most of the vessels from Sydney are loaded; and therefore would it not be well to take in lead and copper ores to the quantity of dead weight required in Adelaide, and then fill up with wool or other cargo at some other part if no such freight were ready in South Australia?

Lieut. Waghorn is the originator of this company, and I should think that there are few who have forgotten the very great advantages that have accrued from steam communication to India, which he first was the means of bringing about; the present scheme is, however, on a grander scale, and certainly leads to the belief that it will eventually be the means of causing a much more safe and rapid communication than heretofore, and therefore become a source of comfort and gain to the inhabitants of all the different colonies at which the steamers call.

It is intended to circumnavigate the whole island of New Holland, and also Van Diemen's Land, and to

call at all the different colonies, as New South Wales, Port Philip, South Australia, Van Diemen's Land, Western Australia, and New Zealand, thus giving all and each of them the benefit of much more rapid transmission of both passengers and property.

The following abstract of the sales of copper ore at Swansea during the last twelve months, compared with the sales in the preceding year, is taken from the *South Australian News*, published monthly by Hailes, Leadenhall Street.

Mines.	1847.				1846.			
	21 Cwts.	Amount realised.			21 Cwts.	Amount realised.		
		£	s.	d.		£	s.	d.
Burra Burra.....	4351	94,263	2	0	1176	20,684	5	6
Kapunda	1480	27,769	8	6	831	16,726	1	6
Kanmantoo	228	3,236	0	6	78	1,259	14	0
Paringa.....	100	1,608	6	0	19	394	5	0
Princess Royal...	60	1,221	15	0	...	.....		
Montacute	55	1,029	18	0	265	4,370	12	6
Yattagolinga.....	...	.....			2	27	4	0

"The increase shown in the above table is the more remarkable, when it is remembered that the sales of copper ore from South Australia only commenced on a small scale in 1845; and that it was not until the middle of 1846 the ore from more than one or two of the mines began to appear in the Swansea lists.

"The colony has never had a more favourable opportunity for proving its wealth than is now offered. We accordingly find that the proprietors of the Kapunda have realised a large amount by disposing of a portion of their property; that the Burra Burra

Mine has remunerated the adventurers, by dividends amounting to two hundred per cent. on the paid up capital; and there is reason for believing that the South Australian Company have profited largely by the revenue from their mining grounds, and still more by the advantages which it is reported must result from future operations. Of course, amidst the many concerns which have been projected, several have proved unremunerative; but it is evident, that were these mines situated in England, or were smelting carried on in the colony, a considerable profit would be realised from their working. It is to be hoped, indeed, that before long some of the newly patented processes for reducing ores will be adopted, for in that case incalculable benefits must result.

"The labouring classes have in their turn derived a share of the good from the great accession of wealth in the colony. The increased demand for labour, for instance, is manifested in various modes, there being, apart from the employment at the mines, the formation of villages and the construction of works, constant traffic on the roads with drays, coaches, and all vehicles of transport; in addition there are supplies of every kind, from complicated machinery to bags 'in any quantities' for the daily use of these important undertakings. Thousands of families are thus dependent for subsistence on the progress of mining, and several have greatly improved their circumstances in life through their industrious habits, and the fortunate results of their labour. It is an agreeable duty to state, that at these new locations, where so much attention is given to the accumulation

of wealth, there has been no neglect of the moral and spiritual wants of the people. Already there are places of worship, as well as day and Sabbath schools, with every disposition on the part of the people to support and second the efforts made for their improvement. There is, in fact, every reason for expecting that the mining population in South Australia will be fully equal to the same class in this country, displaying high moral and religious feelings, a bond of fellowship which creates a love of home, and a kindness of disposition towards those suffering from accident or distress.

"Looking, then, at these important results, which concern the whole community of the colony, we trust that, in future exertions for carrying on this important branch of trade, a continuance of success may be manifested, and especially that the prospects of the colony may not be marred by injudicious speculation, nor the future welfare of the population hazarded by profuse extravagance. A wise policy will dictate caution and prudence. Let but these be observed, and there can be no doubt of South Australia attaining, by her mineral possessions, and by her agricultural and commercial advantages, a position of perhaps the highest eminence among the colonial dependencies of the British crown."

CHAPTER XI.

NATIVES.—THEIR HABITATIONS.—WORKING AMONG THE SETTLERS.—GRUMBLERS IN THE STATE OF NATURE.—PAINTING THE BODY.—NATIVE WOMEN.—CLOTHING.—SUPERSTITIONS.—BURIALS.—CORROBERIES.—FIGHTING.—JEALOUSY.—STEALING WOMEN.—NIGHT ATTACKS.—TREATMENT IN CASE OF ILLNESS.—NO REGULAR MEDICAL ATTENDANT ALLOWED.—PORT LINCOLN BLACKS.—SUPERSTITIONS REGARDING DEATH.—MR. EYRE'S ACCOUNT.—OBSERVATIONS OF W. P. JAMES, ESQ., ON THE ABORIGINAL NATIVES OF SOUTH AUSTRALIA.—ALSO OF R. G. THOMAS, ESQ.

On the first arrival of the white people in South Australia, the aborigines were found to be harmless, and soon made themselves useful to the emigrants and others, by fetching water, carrying wood, and other work, for which they received biscuit, flour, or any thing they were presented with, and were easily satisfied with but small quantities of goods in return. Down to the present time they have gone on in the same way, making but small improvement, except learning a little English, and getting into some of the ways of the whites, such as clothing themselves when they can; and in but too many instances they have readily adopted the vices without the virtues of their more enlightened visitors. Endeavours have been made to teach them to live in cottages, to culti-

vate the ground, to work about the farms, stores, and other places of business in the colony. As to living in the huts built for them, they complied for a short time with the request to do so, but have always quitted these habitations for little *worleys* or shelters of their own, which are soon deserted and others formed. This might be thought an evidence of their wandering and unsettled life, but they have a reason for frequent changes. Ask them why they do not live in such and such a place, where there is a shelter of their own making, and they answer, "*No good that one; too much plenty fleas; no sleep; too much bite 'um black fellow;*" and at the same time they commence scratching their bodies to exemplify their meaning.

This is one great cause of the constant shifting of their huts, and not that they like to be always employed in making new ones. When I have gone to town, leaving my hut for a few days, I have left a black with my wife, to get her wood and water, take a letter to neighbouring station, bring flour, tea, sugar, or any thing that was wanted; and at those times he has slept before the kitchen fire, and has been only too willing to take up his quarters there from time to time, as long as permitted, or in the neighbourhood. In the room, all our scanty furniture would be left, together with books, papers, food, tobacco and many favourite objects, but I have never found any thing purloined by the blacks, or even meddled with. So much for their honesty.

As to their working amongst the settlers, they will generally assist for days together, as long as there is

work to be done and food to be obtained; but directly this falls short, or they hear of some other place where more can be earned, off they go. A little care must be taken in feeding them; give them plenty, but do it judiciously; if you give them "*plenty tuck out*" early in the day, farewell to all hopes of their exerting themselves for the next few hours. When their cravings of hunger are satisfied, they see no necessity to work; therefore, when the day's work is done, let them eat their fill, and they will get over it by next morning.

They make themselves very useful in reaping, lambing, or shearing times, and will get through a fair quantity of work. Some farmers have had the whole of their corn cut by the blacks, and repaid them for perhaps a fortnight's labour by giving them their food, a blanket, some slop clothes, and a little tobacco; this is all they want, and all that they would ask for before engaging themselves. In shearing, they are useful to mind the shorn sheep, pitch the hurdles, help to wash the flocks, carry out the shepherd's weekly rations on a horse, or on their own shoulders, &c. &c. Sheep-dressing often forms a part of their occupation; and, in fine, nothing comes amiss to them. Any person who lives in the bush and treats them properly, will be amply recompensed for his kindness if an opportunity offer of their showing gratitude.

I have often known them to report the whereabouts of missing sheep, cattle, or horses, and to bring them in, without so much as expecting a reward; and they will generally go out, and endeavour to track any sheep that have got adrift; they will walk about in

the bush, looking here, there, and everywhere, and if they find the sheep, they show as much pleasure as the owner himself, describing the place they were in, how they stared when they saw them; tell you at what a rate they ran when observed off a distant hill, and, in fact, quite divert you by their quaint and infantile descriptions. The women, although not handsome, will wash and work about, and seem quite pleased to assist the "*white lubra*." We used to have some often about the place, and they were constantly employed in one way or another, if we had any work for them to do. When they were going away, they would come to get our parting blessing in the shape of a crust of bread, or scrap of meat, to tell us where they were going to; how many "*sleeps*," or days, "*moons*," or months, they expected to be away, and appear quite sorry not to remain with us longer. These were our favourites; others that we did not like, or know so well, came and went almost without our knowledge, and took little notice of us, except to ask for something to eat, and tell us they were "*plenty hungry*." Some were never satisfied with any thing that could be given them, but these were the exception to the rule; one, in particular, called "old mother Gibblegobble," was incessantly complaining; nothing was good enough, or in sufficient plenty for her; it was her disease continually to grumble, and of this disease she was very bad; her case was hopeless; but she was good-tempered, would laugh and joke as well as the rest, until her particular faculty or malady was called forth, but, when once set a-going, nothing was able to please her. I re-

member her complaining to one of the blacks about some omission on her part, for which she had been checked by a crack on the *cocoa-nut*. Jack could not stand it, and got a stick to salute her. I saw her scamper off into the creek, and over the hills; and for once in her life she ought to have been satisfied, for she escaped a tremendous beating. It was amusing to see her fly along with her old bits of clothes and skins streaming in the wind; but I should not wonder if she would have cheerfully compounded for a moderate beating if allowed to convert it into a crop of complaints.

It is a common custom with the blacks to paint their bodies on different occasions with various substances, such as red ochre, charcoal, and lime or chalk; these are made up into an odorous mass, by mixture with either oil or fat, and are then rubbed over all parts of the body, after which the blacks think themselves very fine and handsome—shining characters. This custom may have originated from the necessity of preventing their naked bodies from being stung or bitten by the insects that swarm about their habitations; and also, like other nations that go without clothes, as the Africans, they may have anointed their persons to prevent the skin from cracking, with either the wet, heat, or cold. It would be well if they would only use clean fat, and obviate that sickening smell that will tell you of their approach when they are yards off.

It seems to be pretty general, that where civilised man goes the nomadic savages die off; and no where is this better observed than in Australia; for, during

the short time I was in that country, I could perceive a great diminution in the number of natives, and should say that they were less by one-third than when I first saw them about seven years before. In one part, a tribe of thirty or forty was reduced to twelve or fifteen, and these had joined neighbouring tribes, so that as a distinct tribe they were lost. This was at a part on the coast, between Rapid and Encounter Bays, called the Tunkalilla and Wipinga district. This I learned from the blacks themselves, who told me that that was their country, but that their friends were *crack-a-back*, meaning dead. In other parts the decrease has been great, though not to the same extent.

The natives seem to be divided into small tribes, but without any chief or king to rule them; but they refer their disputes to, or, in case of going to war, ask advice of, the old men of the tribe, who, however, have no great influence over them, if their opinion clashes with that of the petitioners. The women have little to do with their deliberations, but sit silent, and only pass remarks amongst themselves, except when some very exciting subject is broached, when they commence an animated jabbering, and, unless silenced by the men, hold forth at great length. These poor creatures are in an abject state, and are only treated with about the same consideration as the dogs that accompany them; they are obliged to give any food that may be desired to the men, and to sit and see them eat it, considering themselves amply repaid if they are rewarded by having a piece of grizzle, or any other leavings pitched to them.

The women are either not allowed, or do not think themselves able, to climb trees for opossums, and therefore their food only consists of those roots and herbs which they can dig up or gather from the earth, and of the grubs, lizards, and snakes that they kill. Birds they seldom obtain, as they cannot throw the spear, and they are also useless in catching fish, but they make the nets which the men employ, and exercise other feminine accomplishments of the same kind. From a peculiar species of grass they construct neat baskets, and mats to cover themselves with; these are commenced at a central point, and worked round and round, the women not being acquainted with the mode of making square articles. They sew neatly, with thread made of the sinews of the kangaroo, which they take out of the tail as soon as the animal is killed. Instead of a needle they have a sharp-pointed piece of bone, with which they make a hole in the skins, and then pass the sinew through, something like our shoemakers. These skins sewed together are greatly valued by them, and are little, if at all, inferior to blankets; but, as for the rest of their dress, it generally amounts to no more than a kind of mat tied round the middle, and over the shoulders a rug of skins, or any old bit of cloth they happen to obtain.

When on a journey, they bear the baggage, and the men stalk before them, only carrying their spears and other weapons, and a little basket slung from the arm. On arriving at the place where they are to camp, the men break down branches of trees, and strip bark to make themselves a worley or shelter,

and the women are left to make their own worleys in the best way they can. The worleys are little better as shelters than a hedge, only that they are arched two or three feet over head, and in some cases made rain proof by a covering of rushes or bark. They are in a circular form, with the back towards the quarter from whence the wind blows; when they are constructed, a fire is lighted in the centre, and wood enough collected to last the whole night; for the natives have a horror of being left without light. Their superstition on this point is strong, and hardly any inducement will cause them to move to a distance from their camps after dark; or, if they do so, they may be observed to keep a most anxious eye all around them, evidently expecting to see some enemy or spectre behind every tree or bush on the road. They have some idea of another world, but I have never been able to satisfy myself as to what particular belief they entertain about a Supreme Being whose wish it is to do them good. They believe that the Evil Spirit is very powerful, and continually walking about to catch and kill them, and when any of them have sickened and died they think that the devil has been at him, and given him a squeeze, and they say that *de Debil Debil take him;* this is one name they give the Enemy; another is, *Tong Kingariall;* but, whether the first has been derived from the English devil, I do not know. The devil has them under his care after they die, and they endeavour to scare him away by making all kinds of noises, and performing queer antics over the body; by doing every thing, in fact, that would frighten him, upon the supposition that he was

timid. One means is curious; after death the body is placed sitting up, and a strong lashing is put round the neck, and under the legs by the knees, and this, when drawn tight, presses up the knees and head close together; the arms are then tucked close to the body, which now resembles a ball as nearly as it is possible. The body is then covered with what clothes, blanket, or skin rug may have belonged to the deceased, and his different weapons are collected by his side. A kind of hand barrow being formed, and covered with rushes, the body is placed thereon, and carried by four young men quite naked, and evidently prepared for some extraordinary exertion. One or two of the tribe precede the body; the others, men, women, and children, follow close behind it, and sing, or rather howl out, a dirge. The bearers of the body (which I forgot to say is tightly lashed to the frame on which it is placed) first walk at a sober pace, and then gradually increase the speed until they run as hard as they can: this is kept up for some time, when suddenly a yell is heard, and as quick as possible all stop, and fall down on one knee; on which they keep shuffling along the ground for a considerable time: then the other is knelt upon, and they progress as well as they can upon the knees, until another yell sets them on their feet, scampering and stopping, kneeling, crouching along the ground, beating the trees and bushes with their sticks, and tearing their hair, until being quite exhausted, and with the perspiration streaming down their bodies, they return the body to the little shelter it was in before, and, after a general howl, separate to follow their ordinary occu-

pations. This is kept up at intervals for several days, after which the body is either buried, or placed in a tree, or on a scaffolding erected for the purpose.

After a death the women blacken the bodies with charcoal and grease, as also do the near male relatives of the deceased; but, for love or war, no other colours are used but red and white, which indeed are enough (with their taste for painting) to make them look rather more than human. For their dances they paint in a gaudy manner; first, being quite naked, they put on a thick coating of red ochre and fat, taking care to rub it well into the hair and beard, and then, with powdered chalk and fat, they put in touches that tell well when seen at night by the light of a blazing fire, and which doubtless go a great way towards captivating the native beauties.

On the occasion of one of their grand affairs, as many as two or three hundred natives will be often collected, scattered over the plain by tribes, and all prepared to join in at the grand *corrobery*, when the proper time comes; and then they march up to some particular tribe, which has a large fire made, and plenty of boughs covered with dry leaves ranged about. As the guests arrive, the men march into the centre of a circle formed by the women and children, and seat themselves until all are come and ready to commence, when one begins a low wailing tune, in which all join, and gradually raising the voice, in most exact and admirable time, they burst out in full vigour, and, all springing up on the instant, commence their national or tribal dance, the women and children still sitting in a circle, and keeping time by beating

their hands upon a piece of skin tightly rolled up; this they all strike at the exact moment, giving to any one a little way off the idea that it is but a single blow. The dance is a medley of curious contortions of the body more than a rapid movement of the feet, and is continued over and over again according to the tune to which they move. In one hand is carried a club, and in the other a branch of some green bush; this last at stated times is moved rapidly over the head, and the noise from the whole number, quickly vibrated at the same time, may be heard to a great distance.

The grand dances termed *corroberies* take place on the occasion of a wedding, or before a fight. In the first instance the whole party is joined together in kindly feeling, but, when the latter is to happen, each side has a dance to itself, and no doubt stimulates itself, and screws up its courage by appropriate language and gestures. The affair comes off early in the morning, each little army being drawn out in front of the other, and, according to agreement, the fight takes place either with spears or waddies. If with the former, it commences by some warrior (after haranguing and endeavouring to discourage his opponents by sarcasms and insults) throwing his spear, which is guarded off by the opposite party, who are supplied with shields for that purpose. This makes a beginning, and the fight is kept up until one party or other has some men wounded, or the spears are all broken and useless; even then, however, if *satisfaction* be not obtained, the waddies or clubs are brought out, and then another preliminary form is gone

through. This consists in one man from each party stepping forth, and when they meet, after plenty of energetic discourse, and perhaps spitting at each other, one will hold down his head, evidently requesting the other to try to muster courage to strike him. This is soon done, and with hearty good will too, for, raising his weapon in one hand well over his head, he brings it to bear upon his enemy's unprotected cocoa-nut with such force that the hollow sound may be heard at a distance of nearly half a mile. This, which would fracture the thickest-skulled European, brings the native to the ground, and there he remains for a minute or two, until the twitching of the legs and arms shows that he is only killed, and not regularly *crack-a-back*. The expression *killed*, with them means only the receipt of a severe blow; but *crack-a-back* is the actual quietus. When he again gets up, his eyes perhaps squint a little from the treatment he has received, but they also glisten with pleasure at the prospect of having an opportunity of revenging himself, as the punisher's turn has now come, and he stoops down his head to take his dose, which may be imagined to be a bitter one; directly that he in his turn has fallen, a great yell shows that the general *mêlée* has commenced, and then Donnybrook fair in all its glory is but a shadow of the savage row.

Most of the men are extremely jealous of their wives, of which some have as many as three or four. This may perhaps be accounted for by the curious manner they have of obtaining partners. Instead of a regular courtship and match-making among the women of his own tribe, any young man

who has arrived at a proper age, and gone through the requisite ceremonials, sallies out to a distant and generally hostile tribe, and there watches his opportunity of stealing any woman whom he fancies. For this purpose he lurks about, and when he arrives at a camping place where he discovers that only women and children are together, he, or they (for two or three young men usually travel together) pounce upon the party, and either by persuasion or blows, take away the women they want, and then, by rapid travelling, all the time hurrying the women on before them, they endeavour to regain their own tribe before pursuit can be attempted. This stealing wives is one cause of the frequent wars that take place amongst the natives; and if the stolen woman be married to another man, who objects to give her up, the consequences are sometimes serious. I remember that in one case an Encounter Bay native stole a woman from one of the Murray River tribes. This was during the whaling season, when a number of natives are always collected about the fishing stations, to feed upon the flesh of the whales that are taken. This poor woman and her husband were staying at Encounter Bay, and living comfortably enough (considering that she had been forced away from her former master), and every thing went on well; no pursuit had been apprehended, and no enemies seen about the districts, when one day, as the woman was with some others looking about the beach for food, a man was seen rushing down to them, armed with his club and spear, and was instantly recognised as the former husband. His looks quite prepared the poor woman

for bad treatment, and she ran away along the beach, followed by her old master, who overtook her and commenced beating her about the head; she then ran into the water, which in that part happened to be shallow for a distance out to sea, and when she saw that no chance was left, and that all her intercessions were of no avail, her courage left her, and she stood still to receive her fate. The savage was observed to lift his club high in the air, and, bringing it down upon her temple with all his force, she sank into the sea, and never breathed again.

This happened in a populous district, within sight of the natives' huts, and about eleven o'clock in the morning; and although the wretch was pursued, and the police were out for some days in search of him, I believe that he escaped.

A short time before I left Australia, I was visiting at a friend's house, and some natives (two men and three women) were camped at about forty yards' distance. We were making our beds ready, and getting every thing comfortable for the night, when one of the black men opened the door and asked the master of the station to lend him a gun, as some wild blacks were prowling about with the intention of attacking them. The gun was accordingly brought out, and we all sallied forth to see what would happen. It was nearly full moon, and the sky unclouded, every object being seen with distinctness almost to as great a distance as in the day-time. No sound broke the stillness except the distant lowing of cattle, and the unearthly sound made by the bronze-winged pigeons. In front of the hut was a large meadow covered with

high grass, and in this grass had our native seen and heard the crawling enemy, but whom we searched for in vain; for they were no where to be seen, although every tree and bush was examined. This was a disappointment, for we longed to witness a night attack, and when we had again collected our forces, and were returning to the hut, I asked the blacks to show us how they manage in such cases, supposing one man to be sleeping out, and to be beset. One instantly replied, "Berry well; me sleep, Jackey kill me if he can, but me no let him. Me lay down here sleep. Me put 'um waddy so," placing it on the ground to his head, within easy reach. Jackey then went off a little distance, and instantly seemed to discover his sleeping foe. Putting his hand so as to keep the gleam of the moon from his eyes, he noiselessly sank down on the ground, taking a firm hold of his club, crawled along upon his hands and knees, holding his breath; and whenever he made the least noise, by breaking a dry stick or rustling the grass, he crouched down to the earth, and there remained without motion until he thought that all was right; and then he again advanced, now and then raising his head to narrowly watch the sleeper. When within about thirty feet Ned heard him coming, and slowly raising his head about a couple of inches, and only partially opening one eye that the glistening of the eyes in the moonlight might not betray him, he saw what was intended, and slightly moved the handle of his club, so as the sooner to get a good grip of it. No person could now tell that he was awake, for the position was thoroughly easy and natural, and the loud

breathing exactly done. Jackey continued to advance until within about ten feet, and then, after a long rest and anxious survey, he laid down at full length on the ground, and pushed forward like a snake, though how he made way as he did I cannot tell, for his limbs were almost motionless. It must have been difficult even to a practised hand, for the big drops of perspiration rolled down his body, and he seemed nearly exhausted with the amazing effort. He had now reached his victim, and raising his body, so that he knelt upon one knee, he prepared to strike the blow; first measuring the exact spot where he intended to strike, and then raising the waddy, down it came, but quick as lightning was parried by the other, who had sprung up, and dealt poor Jackey, who was evidently taken off his guard, such an imaginary blow upon the head, that, had it been real, he would have repented disturbing Ned's slumbers. The two men now had a good laugh, and expressed their admiration of each other's acting, but evidently considered that we should pay for our fun, for they asked for tobacco, and, that being given them, wanted some supper, which they also obtained, and went cheerfully to their *worleys*.

As to the blacks of whom they had that evening been in search, they told me that they had been most likely tracked or seen by some roving enemy, who, aware of the poor resistance that two men could make against four or five (which they stated to be the numbers seen), had intended to attack them, and take away their *lubras*. These poor creatures (the women) did not fancy this any more than the men,

for they kept up an incessant jabbering and crying all night, and at daylight the whole party moved off to where they would meet more of their friends, and be able to sleep in safety.

The ideas of the natives concerning medicine are strange; they compare disadvantageously with those of other savages, who possess useful knowledge of different herbs, and are experienced in remedies for wounds and bruises. A friend of mine, a surgeon in Australia, received a small sum from government for supplying medicine to such natives as required it; but he found the greatest difficulty in making them follow his instructions. One case will show what I mean. A black belonging to the Encounter Bay tribe was observed to be ill, and under the following treatment. A skin rug was placed on the sand, and, as he complained of severe pain in his chest and stomach, he was laid upon the rug with his back uppermost. Two men then began rubbing him with their hands, and, after continuing this for some time, they both commenced jumping upon him, and others beat him with the palms of their hands, while he all the time roared and groaned most piteously. This did him no good, and he was brought to the doctor, who gave him a large dose of calomel and opium; and two or three blankets were lent to wrap him in, and keep him as warm as possible, strict injunctions being given to the natives to keep him quiet. In less than a quarter of an hour my friend saw them carry him to the sea (which was within fifty yards), and continue to duck him under water until he was

in such a state that he died within six hours afterwards.

I think that surgeons should be appointed to administer to those natives that are sick; this was the case formerly in one or two places, but now it is done away with, and the poor creatures have no chance of obtaining any remedy, unless through the charity of the settlers, who, were they ever so willing to give, might not have the proper remedies by them, or apply them aright. About two years since, the natives to the south of Adelaide were grievously afflicted with a complaint that carried off a great number. On being first attacked with it, their skins were covered with a rash, which itched intensely, and made them scratch off the heads of the elevations: these soon spread, and became larger and deeper, until the whole body was covered with a continuous sore. Two women came and asked me to give them medicine, and, not having any thing but aperient pills and sulphur, I gave them some of the first to take directly, and the other I made into an ointment, which they rubbed upon their sores. In the course of two or three days, more came back with these two, who said they were nearly well, and wanted more ointment; this they had as long as it lasted, and very sorry they seemed when I told them I had no more to give, and could not buy any nearer than Adelaide, which was sixty miles off. One child was brought by its mother, and both, but especially the child, were in a deplorable state. The dirt and filth that they smear themselves with had made the poor

little creature's skin nothing but sores, and it could hardly be moved in its mother's arms without crying. My wife, who was always much liked by the natives, got a tub of warm water, and washed the child thoroughly, and gave the mother clean clothes, which she put on the child, after rubbing its skin with ointment. This was done once or twice; but it was of no avail, for the little creature was too far gone to recover under our limited medical knowledge; and one night it was fretful, and cried much while the natives were in their camp. The next morning it was not to be seen, for during the night they had kept up a large fire, which told plainly enough what its fate had been. They thought it better to put it out of its misery, which had no doubt been done, for it is unusual with the natives to have larger fires in their camps than they can help. I did not apply to the government for medicines, because I had reason to suppose it would not have been granted; but really something ought to be done, unless it be the wish of the civilised men that these poor creatures should die off.

The following is an extract from a letter which appeared in the Adelaide papers, dated Port Lincoln, 1st August, 1846:—

"A few seasons ago Mr. Schürman employed the natives to fence in, and assist in the subsequent cultivation of, about eight acres of wheat for their own use; he then wrote to the authorities in Adelaide for a dozen reaping hooks, and got for answer, that the *Government was not in funds.* He advocated the forming a location here, such as had been strongly

recommended, and received 100*l.* last year from a society in Germany to form one on ground reserved here for this purpose, upon condition of our governor's advancing a similar sum; this proposition, alas! was also rejected. With this sample of political parsimony on the part of the British Government towards a people that it has taken under its fostering care as British subjects, Mr. Schürman was disgusted, and gave up the charge of a flock that can never be put under a better shepherd. During the last harvest, eighty acres of wheat out of every hundred were cut by the natives, and there were one or more of them at nearly every station during the lambing, or employed in minding small flocks. At present two of them go out regularly with a flock of 600 sheep each, and the flock of one of these was for some time 900, out of which he never lost one."

Many of the superstitions of the natives are curious, and one regarding any dead relative is, I believe, not met with in any other part of the world. The blacks living among civilised people very readily adopt any European Christian name, or in fact any word that they may be called by a white man requested to name them. Thus I remember women named Monkey, Cockeye, Pretty Sally, Grumble, Long Mary, &c.; and men named Jim Crow, Paddy, Long Jack, Jumbo, Encounter Bay Bob, Rapid Bay Jack, &c. Concerning Rapid Bay Jack, the circumstance occurred to which I allude about their superstitions. This man was well known to the southward, both on account of his superior civilisation, and from his being a sort of chief among the Rapid

Bay tribe. This rank does not coincide with the general notions of chiefdom, for such is not known amongst them; but any man who, by his valour and courage, has become conspicuous among the tribe, is consulted, and holds some supremacy, but only as long as his wishes accord with those of the majority. This man was such a chief, and his good behaviour had made him a favourite amongst the settlers, who were glad to see him, and gave him odd jobs to do, for which he was paid in food for himself and wives; for I believe that he was blessed with a couple, who travelled about the country with him.

About four years since he was seized with inflammation of the lungs, and remained in a bad state of health for a length of time, until he was too weak to move about of his own accord, and was carried from one place to another on a kind of hand-barrow made by the natives. The tribe removed to the neighbourhood of Yankalilla Bay, close to Mr. Kemmis's station, and here he was treated with the greatest kindness by that gentleman and family. They regularly supplied him with food proper for him, lent him bedding, and frequently went to his worlie to inquire after him, and, as his end approached, spared no pains to render him as comfortable as possible. The near prospect of death was any thing but unpleasant to poor Bob, for he looked forward to it as freeing him from all trouble, and believed that he would again appear in some other part of the world in a higher state; in fact, that he would once more arise, but be no longer black, for

he would be gifted with all the advantages and colour of the European. As they say, "*Black fellow tumble down crack-a-back, debil take him, jump up white fellow.*" Their meaning by "*tumble down crack-a-back*" is that they die; and then they believe that their Great Spirit takes the soul, and then they are born again with a white body. When a child is born, it is always said to *jump up.*

At last poor Bob died, and his friends began a loud wailing, and the hills reechoed with their mournful cries, which continued until he was consigned to the earth. Amongst those that bewailed his loss was his old widowed mother, who had long looked upon him as the flower of his race, and her wailings were proportionate to her love. After the funeral, this old woman was visited, according to her own account, by her departed son; and she told me that she had some long and loving conversations with him, during which, he told her that he was very happy and comfortable, caught many kangaroos and emus, and was well supplied with the white man's food and clothing; desired her not to lament his departure, and, in short, said every thing that a son could say. As soon as the breath had departed all mention of his name was discontinued; and if any of the tribe were asked where Bob was, they looked as if they did not know who was meant; and if further pressed, would earnestly request that his name might not again be mentioned to them on any account whatever, saying that if he were talked about, it was not unlikely that he would return, and be very angry with them for disturbing him. This is carried

to such a length, that if another of the tribe be called by the same name, they instantly alter it, and it is not again resumed.

The following extracts, written by Mr. Eyre, present a faithful picture of the aborigines, and will no doubt be interesting. Mr. Eyre has, by his constant communication with the natives, obtained so thorough an insight into their ways and notions, that he is more capable of giving an opinion than any man in the colonies, and by the faithful discharge of his duties to his dusky friends, has well deserved the position that he now holds.

After saying that it is his anxious wish to see an interest excited in their behalf, he continues:—

"For the last twelve years I have been personally resident in one or other of the Australian colonies, and have always been in frequent intercourse with the aboriginal tribes that were near, rarely being without some of them constantly with me as domestics.

"To the advantages of private opportunities of acquiring a knowledge of their character, were added, latterly, the facilities afforded by my holding a public appointment in South Australia, in the midst of a district more densely populated by natives than any in that colony, where no settler had ventured to locate, and where, prior to my arrival in October, 1841, frightful scenes of bloodshed, rapine and hostility between the natives and parties coming overland with stock, had been of frequent and very recent occurrence.

"As resident magistrate of the Murray district, I may almost say, that for the last three years I have lived with the natives. My duties have frequently taken me to very great distances up the Murray or the Darling rivers, when I was generally accompanied only by a single European, or at most two, and where, if attacked, there was no possibility of my receiving any human aid. I have gone almost alone among

hordes of those fierce and blood-thirsty savages, as they were then considered, and have stood singly amongst them in the remote and trackless wilds, when hundreds were congregated around, without ever receiving the least injury or insult.

"In my first visits to the more distant tribes I found them shy, alarmed and suspicious, but soon learning that I had no wish to injure them, they met me with readiness and confidence. My wishes became their law; they conceded points to me that they would not have done to their own people, and on many occasions cheerfully underwent hunger, thirst and fatigue to serve me.

"Former habits and prejudices in some respects gave way to the influence I acquired. Tribes that never met or heard of one another before, were brought to mingle in friendly intercourse. Single individuals traversed over immense distances and through many intervening tribes, which formerly they never could have attempted to pass, and in accomplishing this the white man's name alone was the talisman that proved their safeguard and protection.

"During the whole of the three years I was resident at Moorunde, not a single case of serious injury or aggression ever took place on the part of the natives against the Europeans; and a district, once considered the wildest and most dangerous, was, when I left it in November, 1844, looked upon as one of the most peaceable and orderly in the province.

"As far as has yet been ascertained, the whole of the aboriginal inhabitants of this continent, scattered as they are over an immense extent of country, bear so striking a resemblance in physical appearance and structure to each other, and their general habits, customs and pursuits are also very similar, though modified in some respects by local circumstances or climate, that little doubt can be entertained that all have originally sprung from the same stock. The principal points of difference, observable between various tribes, appear to consist chiefly in some of their ceremonial observances, and in the variations of dialect in the language they speak; the latter are, indeed, frequently so great, that even to persons thoroughly acquainted with any one dialect, there is not the slightest clue

by which he can understand what is said by a tribe speaking a different one."

Of the actual condition and future prospects of the aborigines of South Australia, Mr. Eyre gives a gloomy but faithful account:—

"The character of the Australian native has been so constantly misrepresented and traduced, that by the world at large he is looked upon as the lowest and most degraded of the human species, and is generally considered as ranking but little above the members of the brute creation. Savages have always many vices, but I do not think that these are worse in the New Hollanders, than in many other aboriginal races. It is said, indeed, that the Australian is an irreclaimable, unteachable being; that he is cruel, blood-thirsty, revengeful, and treacherous; and in support of such assertions, references are made to the total failure of all missionary and scholastic efforts hitherto made on his behalf, and to many deeds of violence or aggression committed by him upon the settler.

"With respect to the first point, I consider that an intimate knowledge of the peculiar habits, laws, and traditions, by which this people are governed, is absolutely necessary before any just opinion can be formed as to how far the means hitherto pursued have been suitable, or adapted to counteract the influence of custom and the force of prejudice. Until this knowledge is attained we have no right to brand them as either irreclaimable or unteachable. My own impression, after long experience and an attentive consideration of the subject, is, that in the present anomalous state of our relations with the aborigines, our measures are neither comprehensive enough, nor is our system sufficiently adapted to the singular circumstances they are in, to enable us successfully to contend with the difficulties and impediments in the way of their rising in the scale of civilization.

"Upon the second point it is also necessary to make many inquiries before we arrive at our conclusions; and I have no doubt, if this be done with calmness and without prejudice, it will be generally found that there are many extenuating cir-

cumstances which may be brought to modify our judgment. I am anxious, if possible, to place a few of these before the public, in the hope that by lessening in some degree the unfavourable opinion heretofore entertained of the aborigines, they may be considered for the future as more deserving our sympathy and benevolence.

"Without assuming for the native a freedom from vice, or in any way attempting to palliate the many brutalizing habits that pollute his character, I would still contend that if stained with the excesses of unrestrained passions, he is still sometimes sensible to the better emotions of humanity. Many of the worst traits of his character are the result of necessity or the force of custom—the better ones are implanted in him as a part of his nature. With capabilities for receiving and an aptness for acquiring instruction, I believe he has also the capacity for appreciating the rational enjoyments of life.

"Even in his present low and debased condition, and viewed under every disadvantage, I do not imagine that his vices would usually be found greater, or his passions more malignant than those of a very large proportion of men ordinarily denominated civilized. On the contrary, I believe, were Europeans placed under the same circumstances, equally wronged, and equally shut out from redress, they would not exhibit half the moderation or forbearance that these poor untutored children of impulse have invariably shown.

"It is true that occasionally many crimes have been committed by them, and robberies and murder have too often occurred; but who can tell what were the provocations which led to, what the feeling which impelled such deeds? Neither have they been the only or the first aggressors, nor has their race escaped unscathed in the contest. Could blood answer blood, perhaps for every drop of European's shed by natives, a torrent of theirs, by European hands, would crimson the earth.

"Let us now inquire a little upon whose side right and justice are arrayed in palliation (if any such there can be) of deeds of violence or aggression on the part of either.

"It is an undeniable fact, that wherever European colonies have been established in Australia, the native races of the

neighbourhood are rapidly decreasing, and already, in some of the elder settlements, have totally disappeared. It is equally indisputable that the presence of the white man has been the sole agent in producing so lamentable an effect; that the evil is still going on, increased in a ratio proportioned to the number of new settlements formed, or the rapidity with which the settlers overrun new districts. The natural, the inevitable, but the no less melancholy result must be, that in the course of a few years more, if nothing be done to check it, the whole of the aboriginal tribes of Australia will be swept away from the face of the earth. A people who, by their numbers, have spread around the whole of this immense continent, and have probably penetrated into and occupied its inmost recesses, will become quite extinct, their name forgotten, their very existence but a record of history.

"NATIVE SCHOOLS.

"It may be well to inquire what are likely to be the results eventually under the existing arrangements. From the first establishment of the schools, until June, 1843, the children were only instructed at the location; their food was given to them to take to the native encampments to cook, and they were allowed to sleep there at night. The natural consequence was, that the provisions intended for the scholars were shared by the other natives; whilst the evil influence of example, and the jeers of their companions, did away with any good impression produced by their instruction. I have myself, upon going round the encampments in Adelaide by night, seen the school children ridiculed by the elder boys, and induced to join them in making a jest of what they had been taught during the day to look upon as sacred.

"A still more serious evil resulting from this system, was, that the children were more completely brought into the power, and under the influence of the parents; and thus their natural taste for an indolent and rambling life was constantly kept up. The boys naturally became anxious to participate and excel in the sports, ceremonies, or pursuits of their equals, and the girls were compelled to yield to the customs of their tribe,

and break through every lesson of decency or morality which had been inculcated.

"Since June, 1843, the system has so far been altered, that the children, whilst under instruction, are boarded and lodged at the school houses, and as far as practicable, the boys and girls are kept separate. There are still, however, many evils attending the present practice, most of which arise from the inadequacy of the funds applicable to the aborigines, and which must be removed before any permanent good can be expected from the instruction given. The first of these, and perhaps one of the greatest, is that the adult natives make their encampments immediately in the neighbourhood of the schools; whilst the children, when out of school, roam in a great measure at will, or are often employed collecting firewood &c. about the park lands, a place almost constantly occupied by the grown-up natives; there is consequently nearly as much intercourse between the school children and the other natives, and as great an influence exercised over them by the parents and elders, as if they were still allowed to frequent the camps.

"Another evil is, that no inducement is held out to the parents to put their children to school, or to allow them to remain there. They cannot comprehend the advantage of having their children clothed, fed, or educated, whilst they lose their services; on the contrary, they find that all the instruction, advice, or influence of the European, tends to undermine among the children their own customs and authority; and that when compelled to enforce these upon them, they themselves incur the odium of the white men. Independently, however, of this consideration, and of the natural desire of a parent to have his family about him, he is in reality a loser by their absence, for in many of the methods adopted for hunting, fishing, or similar pursuits, the services even of young children are often very important. For the deprivation of these, which he suffers when his children are at school, he receives no equivalent, and it is no wonder, therefore, that by far the greater majority of natives would prefer keeping their children to travel with them, to assist in hunting or fishing. It is a rare occurrence for parents to send, or even willingly to permit their

children to go to school, and the masters have consequently to go round the native encampments to collect and bring away the children against their wishes. This is tacitly submitted to at the time, but whenever the parents remove to another locality, the children are informed of it, and at once run away to join them; so that the good that has been done in school, is much more rapidly undone at the native camp. I have often heard the parents complain indignantly of their children being thus taken; and one old man who had been so treated, but whose children had run away and joined him again, used vehemently to declare, that if taken any more, he would steal some European children instead, and take them into the bush to teach them. He said he could learn them something useful—to make weapons and nets, to hunt, or to fish—but what good did the Europeans communicate to his children?

"A third and a very great evil is, that after a native boy or girl has been educated and brought up at the school, no future provision is made for either, nor have they the means of following any useful occupation, or the opportunity of settling themselves in life, or of forming any domestic ties or connections whatever, save by falling back again upon the rude and savage life from which it was hoped education would have weaned them. It is unnatural, therefore, to suppose that under existing circumstances they should ever do other than relapse into their former state; we cannot expect that individuals should isolate themselves completely from their kind, when by so doing, they give up for ever all hope of forming any of those domestic ties that can render their lives happy.

"Such being the very limited, and perhaps somewhat equivocal advantages we offer the aborigines, we can hardly expect that much or permanent benefit can accrue to them: and ought not to be disappointed if such is not the case. At present it is difficult to say what are the advantages held out to the natives by the schools, since they have no opportunity of turning their instruction to account, and must from necessity relapse again to the condition of savages when they leave school. Taken as children from their parents, against the wishes of the latter, there are not means sufficient at the

schools for keeping them away from the ill effects of the example and society of the most abandoned of the natives around. They are not protected from the power or influence of their parents and relatives, who are always encouraging them to leave, or to practise what they have been taught not to do. The good that is instilled one day, is the next obliterated by evil example or influence. They have no future openings in life which might lead them to become creditable and useful members of society; and, however well disposed a child may be, there is but one sad and melancholy resource for it at last, that of again joining its tribe, and becoming such as they are. Neither is there that disinclination on the part of the elder children to resume their former mode of life and customs that might perhaps have been expected; for whilst still at school they see and participate enough in the sports, pleasures, or charms of savage life to prevent their acquiring a distaste to it; and when the time arrives for their departure, they are generally willing and anxious to enter upon the career before them, and take their part in the pursuits or duties of their tribe. Boys usually leave school about fourteen, to join in the chase, or learn the practice of war. Girls are compelled to leave about twelve, through the joint influence of parents and husbands, to join the latter; and those only who have been acquainted with the life of slavery and degradation a native female is subject to, can at all form an opinion of the wretched prospect before her."

Two of my friends, who have spent some considerable time in the colony, have kindly furnished me with their experience and impressions of the natives, of which I gladly avail myself, in order that the reader may have more than one set of opinions and facts presented to him upon a subject so interesting to the general public, as well as to the intending settler.

W. P. James, Esq., on the Aboriginal Natives of New Holland.

"All travellers appear to have been impressed alike with the helpless and debased condition of the inhabitants of Australia on their first contact with them.

"Regardless alike of clothing for their bodies, and of a fixed shelter from the vicissitudes of climate, they care for nothing apparently beyond their present wants. Living upon grubs and roots, which require but little exertion to collect, they are only occasionally impelled, by pressing wants, to greater efforts in the excitements of the chase, again to relapse into their native indolence, after being gorged to excess with the spoil.

"In their social intercourse they present no traces of the influence of any law but that of the strong over the weak; and of doctrine or opinion, nothing more definite than the general mysteries which also encircle our advanced state of civilization, being only rejected to a greater distance from every-day life. It is generally assumed, that if a people are not possessed of arts, and to a certain extent, of a system of government, they are necessarily of debased mind, and with no capacity for civilization: hence the opinion, which is the prevailing belief on this subject, of the immeasurable inferiority of the Australian to the other races of the human family. And yet with this proud doctrine to start from, the European settler, after a better acquaintance with their habits and manners, is forced to the admission that the Australian savage after all

gives strong proof of the close relationship which subsists between him and us, and of the similarity of motives which prompt to action in both cases.

"A native was brought to gaol for stealing a settler's sheep, and being asked by the policeman why he had done so, replied—'What for?—why, long time no white fellow, plenty kangaroo; now white fellow, no kangaroo!' What better reasoning could the policeman himself have given under similar circumstances? The natives discover the differences of intelligence and conduct between the different classes of the settlers, and in their remarks upon it, recognise the superior excellence of truth and honesty. A European treating a native capriciously, and breaking faith with him, is immediately taunted with—'You no good; you no gentleman; you plenty working-man.' The coarse and inferior classes of our countrymen, in roughly showing their contempt for the native, are frequently met with the rebuke, 'What for? what for? me no working-man, me plenty gentleman;' at the same time suiting the action to the word, in assuming a really dignified attitude. How very marked is the independence of this native savage, and how superior to the broken-spirited negro slave?

"A native having visited England in company with his master, and travelled by railway while here, on returning to his native country, told his fellow-countrymen that 'in England horse no good, bullocky no good, plenty whiff,' at the same time drawing his hand quickly before him to indicate the velocity of the railway carriage. His lubra (wife) hearing of his return, hastened to embrace him; he, not lately used

to the hug of a wild beast, coolly extended his hand *à l'Anglais*, and said, 'How d' ye do?' She not understanding this extraordinary conduct of her spouse, sunk down on the ground, and sobbed aloud.

"A young man who frequently visited my hut, evinced on many occasions not only great intelligence, but also great mildness and kindness of disposition. Soon after sunrise he would leave his worlie and proceed to my hut; open the very door gently, softly passing my bed; he would first lay on the ground his spear and other weapons, which he invariably carried about with him, then proceeding to the fire-place, he would rake up the ashes for a red ember, failing which, he would set to work with two small pieces of wood, one having a pointed end placed in a slight notch in the other, and then rapidly twirling it between the hands would quickly produce a blaze; the log fire was soon lit, and the tea-kettle, filled with water, set to boil: having done all this without making the least noise, so as not to disturb my slumbers, he would approach my bed, lay his hand gently on mine, and call me in a whisper until I awoke and looked at him, his face at the same time beaming with joy, a picture of gratified innocence. I have many times laid awake watching these movements of this poor native.

"On one occasion the same person was sent from a station in the country with a letter from a farmer to his brother in Adelaide. He was directed to deliver the letter, and to ask the brother for money to buy tobacco-pipes. He was cautioned not to return without the pipes, as the people were quite out of

them at the station. The native, after a journey of nearly two days, arrives in Adelaide, walks about the streets until he meets the brother on horseback, hands the letter without uttering a syllable, and patiently awaits the perusal before asking money for the pipes; but that done the brother, setting spurs to his horse, says, 'Very good, Jemmy,' and darts away at full speed, while poor Jemmy, disconsolate, stands for a few minutes with his eyes fixed upon the receding figure of his patron, considering what next to do. He at length decides, and goes to a neighbouring house offering his services to chop fire-wood—he is employed and obtains sixpence for the job—he immediately expends the money so obtained in the purchase of the pipes, with which he returns to the station, where he arrived after four days' absence. He told the tale of his adventure quite innocently, and it was afterwards corroborated by the party who had so thoughtlessly hurried away from him.

"Leaving the country to reside in Adelaide, I was often visited by some of my old native friends, who politely called to ask me how I did, and they were on these occasions quite delighted to chat with me.

"At full moon the natives assemble under some majestic gum tree to amuse themselves with singing and dancing—the bright silvery moon peering the while from behind a decayed branch, and dotting with strong touches of light the hideous dancing groups of figures who are on these occasions specially disfigured with white and red colouring pigments, which are intended, it would appear, to give the most ghastly conceivable effect. This corrobery, or dance,

is more like the movements of soldiers on drill than the evolutions of a modern ball-room, and consists of the simultaneous movement of an arm or leg, or of both arms or both legs, by all the party, sometimes slow and measured, then suddenly changing into one of great rapidity, and apparently in imitation of the rushing of the hurricane through the forest. This is done with admirable time to a rude chaunt, in which all join; the women in groups sitting on the ground, and beating upon skins which they have stretched across their knees. I have often been invited by the natives to witness these serenading scenes; they are complimented by the presence of European spectators, and would on such occasions, bring in a few English words into their chaunt. These chaunts sometimes related to war, when all would exhibit in their gesture the most passionate energy, at other times the burden of their song would be of love or the chase, the natives always expressing by their motions and gestures the prevailing sentiment or passion.

"While amongst the Australian natives, I was frequently cautioned not to trust to their fidelity, as it was said that experience had shown them to be both treacherous and cruel. And though I believe there is some reason for the caution, yet I never corroborated it in my intercourse with them, and I do not think that they are much more chargeable with insincerity than many of our fellow-countrymen out there, who seem to think that in virtue of their supposed superiority they are at liberty to treat them

with severity and oppression—to cheat them, and not expect that they will have their revenge. Strict honesty and consistency is the treatment they understand and appreciate best. Having been for several months engaged in taking goods from the natives in barter for food, I was enabled to test this principle in my dealings with them. I never gave them any thing except as payment for value received.

"One day seeing a native woman pass near my station, having on her back a small net filled with gum, which was found about this time to be a valuable export from the colony to England, I hailed her, and offered to give her flour for the gum; she assented; I took it and weighed it in scales, giving her by weight half the quantity of flour. She attentively watched the process, and was evidently pleased with the quantity given her. Next day she came again, bringing this time a larger quantity of gum. I weighed as before, and she immediately perceiving that I had given her a larger quantity of flour than before, exclaimed in great glee, "Ah! me see—plenty gum, then plenty flour." Next day two other women accompanied the first, every day increasing the number, until occasionally I had to barter with as many as thirty in a day, without any of them in any instance asking for more than the quantity given. Those who dealt with them on the principle of taking what they could from them, and paying as little as possible, lost all their traffic. The women made a point of eating all the flour they got for the gum on the same evening, and sometimes were so gorged as not to be able

to move from their worlie for the following day. The men sometimes joined in the feast, but could not be induced to assist in collecting the gum.

"The weapons of the natives are few and very simple, consisting of wooden spears, and waddies or short clubs, which are sometimes used hand to hand, and sometimes thrown to a distance. They have also an instrument which acts on the same principle as the sling in throwing, being an extension of the leverage of the arm, and is used for propelling a light spear. Another instrument which is peculiar to the natives of New Holland is the waumra: it is an adaptation of mechanics so wonderful, that it returns to the thrower after striking the object intended, as a bird flying or a duck on the water, in a way apparently contrary to the laws of moving bodies. It is also singular as having no parallel in the arts of civilization. It may now be sometimes seen in London, being sold as a toy.

"Battles between tribes are neither very frequent nor very destructive; and, in the early encounters of the natives with the settlers, the former were invariably driven back, no matter how unequal the number of combatants: the musket is too deadly a weapon for the savage to cope with. There are, however, some instances of single natives having fought with great desperation. They have a ludicrous way of beginning a fight. The opposing tribes having met, they approach within about fifty yards of each other; at this distance a halt is made, and a great deal of preliminary chattering begins; after talking at each other for some time, two of the boldest, one from

each rank, walk out to meet each other, and, after a few angry words have passed, one of the men, stooping down, holds his head for the other to strike, who with his club gives him a crack over it enough to fracture the skull of any European, the spectators on each side at the same time raising a loud shout. The native, after lying on the ground for some time to recover the effects of the blow, stands up to administer the same to his rival, who with the most extraordinary resignation, submits his head for the same process; he no sooner falls from the effects of the blow, than the opposing ranks join in battle with loud shouts.

"I have frequently had occasion to send natives to distant parts of the settlement with letters, and have always found them unerring and faithful. Guided entirely on those long journeys by directions as to relative distance and position with respect to known objects, as mountains and rivers, shown to them by a rude drawing on the ground; also descriptions of the person directed to, as to stature, colour of hair and complexion, peculiarities of dress, &c., they yet never fail to discover the right person; and, returning to the sender, they mimic so truly the manner of the person who received the letter that one cannot fail to be satisfied that the message has been properly communicated.

"Many other things might be related from the experience of the Australian settler, which would go to show that the native is more sensual than savage, and intellectually of good perception, though wanting in reflection or foresight.

"Our Government is commendably liberal and considerate in the treatment of the aboriginal natives of our vast colonial territories, and the settlers generally are, from opinion, inclined to second the efforts of the Government for their amelioration. But with both Government and individual or missionary effort, the natural character of the native is not made the basis of their labours; and accident has unfortunately led them to begin where they should finish. It may not be very generally known in England, that fifteen per cent. of the proceeds on the sales of waste lands in the colony of South Australia, is appropriated by the Government towards the protection and civilization of the aborigines; this has of late been considerable in amount, and it has been expended in the erection of schools and chapels, and in providing salaries for teachers. The children taught in the Government schools learn to speak English rapidly, and they evince great aptitude in the usual school exercises of learning words and sentences by rote. But this unfortunately has had the effect of misleading the teachers and many others into the belief that they are intellectually equal to the European. Their merely superficial memory for words is mistaken for education in its enlarged sense. I have never seen any useful results from the training which they undergo in these schools. The children, indeed, find that by committing a few sentences to memory, they please the white fellow, and get presents from him which they could not otherwise obtain. They go about the streets chaunting a medley of passages of scripture, portions of catechism, the Lord's Prayer,

and portions of an old song picked up in the streets amongst the European children. It is no unusual thing to be accosted in the street by a little black urchin with—'White fellow; you give me white money (meaning silver), me say prayers.' In fact the only discovery they appear to have made from these teachings is, that the white fellow's pocket is made more accessible by their means.

"It may be thought from the preceding remarks, that I am opposed to educational and missionary effort amongst the natives; yet I am not, if properly directed. Undoubtedly to bring savage man within the pale of civilization is a glorious thing; to bring him within the pale of Christ's Church is still more glorious. To effect the latter, tens of thousands have been and are expended; and thousands of people gather periodically at Exeter Hall and elsewhere, to hear the results, and they do hear what gratifies them. But many who go to these meetings feel sick at heart to reflect that multitudes of their fellow-countrymen, who are almost unheeded, are in a state of utter heathenism, and that their civilization exceeds but little that of the savage. So it is in Britain—so it is in Australia. Schools are founded, masters are appointed, interest and sympathy are called for on behalf of that lowest grade of humanity, the aborigines. And for what is this done? Not to civilize them according to their capacity, and by a common-sense method—not, when we have taken their land and almost the means of existence from them, to teach them the means of gaining an honest living—but to put instruments in their

hands which they have not the capacity to appreciate. They are taught to read and to write, and habits of order and obedience are impressed upon their minds by the whip and the lash, and every seventh day other teachers come to inculcate Christianity, and then their parents come to inculcate cunning, trickery and deceit. Need it be asked which will prevail—the occasional or the constant teacher? Which will influence their future lives—unfailing example or casual precept? It may be well in half civilized nations to teach the use of those instruments of intellect—reading and writing—there may be some probability of their being used to good purpose; but, where man has neither house nor fixed habitation, of what use are books and writing apparatus? Will he have more affection for them than for himself? But suppose he can write and numerate, *cui bono?* His seldom exercised powers will get wondrous rusty ere many years, and he may perchance utter a regret that white men did not rather teach him something of use —something by which he might live—than what they have done.

"How different is the treatment of white men by those of their own race; very many grown men and women, and children of every age, in the colony of South Australia, can neither read the Bible, nor write to their far distant friends. And for them there are no schools supported by Government, nor the least shadow of inducement or encouragement held out for establishing them, nor efforts made to get any schols attended. But even without school learning these members make good citizens, though very far from

the mind-led class they should be. And would it not be enough, and by far the best thing that could be done, to raise our dark-skinned brethren to a level with our lowest grade, with a probability of rising higher, than to lift them to a pinnacle from which they cannot but fall?

"Let schools of industry be formed, where the natives can be trained to agricultural labours, and initiated into some easy mechanical crafts, as well as directed and perfected in such of their native manufactures as are useful. Let their morality be strictly attended to, and remove them to a distance from the contamination of towns; when arrived at maturity, and found worthy, apportion them land and a small capital of requisites. It is time enough to teach reading and writing to their children or their children's children.

"Christianize them if you can, but do not make the foundation of their religious superstructure—what must necessarily appear to savages—the toil and drudgery of a week-day school. Their minds are not by any means large; and the necessary gospel truths explained orally to them with conciseness and simplicity, will tell more than their laborious half-reading, half-spelling process, and stumbling over words nearly obsolete except in Scripture, which even the more enlarged minds of Europeans do not always appreciate.

"Our efforts for the extension of civilization should be under the guidance of reason. Give education to those to whom it is more valuable, but do not attempt to give it to those to whom it is useless, or worse, who

cannot be educated: they may certainly be taught to read and write, but nobody of any thought nowadays calls that education. Can they be taught to think and reason, and apply that thought and reasoning to the advancement of their social condition? Not, I fear, to any great extent, without previous partial civilization. It may be urged that they can, from their instruction in reading, study their Bibles for themselves. A mere fallacy. A difficult language, like English, is not so easily mastered by a rude people. They may read, as Milton's daughter read Greek—beautifully, which will conduce as much to their instruction as the Latin service does to the Roman Catholic worshipper. Without a teacher constantly at their elbow they cannot profit by it. If one might judge by their public examinations of the efficiency of the present system of teaching, it must be very limited indeed. Certainly nothing like education is visible at these displays; it is simply a parrot-like training to repeat a few words and sentences which to them have no meaning, and that, by lads who have arrived at an age at which, if it is meant they should be any thing but mendicants for life, they ought to be learning some means whereby to live."

R. G. Thomas, Esq., on the Means of civilizing the Natives of South Australia.

"It is often asked by Europeans why certain savage tribes remain without the pale of civilization. The Indians of North and South America, the wandering tribes of Asia, the savages of Australia, if agreeing in nothing else, agree in this, that the point at which they now stand is the same as it was ages ago, so far as our information extends; indeed they neither advance nor recede, but the same arts, the same practices, the same ceremonies are perpetuated from generation to generation, without change or symptom of improvement.

"The answer to the question is at variance with the preconceived notions of Europeans. They generally consider savage tribes as living in what they are pleased to think a state of freedom, without care and without toil, without control, and acknowledging no master. Yet one has but to see a native tribe, to join them in their wanderings, to be subject to the same controlling influences, to be a partaker of their days of toil and their nights of gluttony, and how soon will one be undeceived, how soon wish oneself back, even amongst the lowest class of our civilized countrymen. Civilization, in fact, is the only state of freedom; and the advances of civilization consist mainly in freeing nations from the trammels of the savage life of their ancestors. The supposed free savage lives in a perpetual state of vassalage. As his forefathers lived, so must he live; all improvement is

denied him. From his infancy he is initiated into his wandering uncertain life; he cannot, dare not attempt a departure from it. Every thing in relation to him is settled by tradition, of which the old men and powerful men of his tribe are the expounders, from whom no appeal is allowed to common sense; and any opposition, supposing such with his limited knowledge, would immediately lead to his death. Even in matters of food, the restrictions upon the wandering savage of Australia, who is supposed to lead a free and independent life, are only to be compared with our almost equally barbarous game laws. Certain fruits and certain animals he is not allowed to touch or hunt, they being reserved for the old men of his tribe; certain weapons he is not allowed to use in hunting them; certain seasons are denied him, and with occasionally want and privation, he is obliged, by tyrannical traditions and customs, to see plenty pass by. In addition to this must be added the nature of the country and climate. With a population which polygamy, infanticide, and barbarous customs, as also exterminating wars perpetuated from generation to generation, keep from increasing, Australia in its present state exhibits no lack of food, whilst its warm and mild climate obviates the necessity, during the greater part of the year, of any clothing at all. Moreover, by the complete isolation of the aborigines from the rest of the world, they have escaped the conquering civilization of other tribes. It is generally stated that Australia barely supplies its native inhabitants with food; but although at particular times such may be the case, yet generally to the aboriginal inhabitant who is

acquainted with its resources, subsistence is abundant. Roots, many species of vegetables, gums (a favourite food), grubs, and all species of animal life (few of which come amiss except, as before stated, the custom of their country forbids) supply the natives with abundant nutriment, as their generally well-fed, healthy appearance proves; and as there is every reason to believe that the population has not increased for generations, there is no adequate stimulant to cause a want for other methods, as cultivation, for instance, even supposing the natives were allowed by the prejudices of their countrymen to try them.

"A stationary population is, therefore, one of the causes of stationary civilization. Want of freedom of will, and a subserviency to ancient customs, is another. To these must also be added deficiency of intellect, and the natural indolence induced by a wandering and exciting life. No nation of hunters has ever advanced in civilization.

"Any permanent improvement of a series of tribes so situated, must come from without, by contact with the undisputed mastery of a thoroughly superior race; of themselves the natives are able to do nothing; and such we believe to be the case with savage tribes now and at all times. Bearing the foregoing statements in mind, we now come to the means which we conceive might and should be used for their improvement; for, in spite of the sneers of some and the sentimentality of others, we fearlessly assert that civilization would be to them a great improvement.

"It is too often a mistake with Europeans in their

endeavour to civilize savage tribes, to attempt the same means with all, whatever radical differences may exist between them. For the half-civilization of the Asiatics and the South Sea Islanders, the utter barbarism of the wandering tribes of South America and Australia, and the bloody superstitions of Africa, there seems to be but one panacea, at all times and all places; we mean those well-meant but often mistaken enterprises of the so-called missionaries. With a certain class of people it seems but just necessary to acquaint them that some well-meaning gentlemen have persuaded a few natives to halloo a psalm, or recite a prayer, the meaning of either of which in most cases is a mystery to them, and they immediately conclude that with so auspicious a beginning but little more is necessary to entitle them to say, that such and such a tribe is beginning to advance in the social state.

"There cannot be a greater mistake; as the history of many has fully proved, and of which the failure as yet of the attempts to reclaim the South Australian aboriginal population is an example. Their education has been begun at the wrong end. The first thing that should be taught to an aboriginal tribe brought into contact with Europeans, is the mechanical arts and processes, the agricultural methods of their visitors, by which we can create new wants and the means of supplying them. Without such means the aborigines will infallibly sink to be the slaves and drudges of their masters, from which state all the psalm-singing in the world will not save them. An education which would fit them, in the great demand

for labour in a new country, to take their places beside the labourers and mechanics of the colonists, would be to them, as also to their country, the greatest of blessings, and Christianity and education as understood by European ideas, would follow naturally in due course. The parrot-like teaching to which they are now subjected, however fine it may sound in an examination, and whatever may be its benefits, which by the by mainly consist in giving reverend gentlemen at Exeter Hall an opportunity of speechifying and showing off themselves and others, can have no result of the kind. In addition to this, as it must be by the English language that all future intercourse will be carried on even amongst themselves, we would have that language made the basis of the slight but useful and deep-grounded education which should accompany their training as labourers and mechanics. Nothing is more absurd than the attempt to graft civilization upon a rude and unwritten language actually wanting in those ideas and symbols which must accompany the new state. Some of the well-meaning gentlemen who have taken upon themselves to instruct their dark brethren, on finding a total absence of words in the language to express new ideas, have actually introduced them from the Greek and Hebrew, thus adding one absurdity to another. Surely coining a barbarous jargon like this for the mere sake of perpetuating a dialect limited to a few hundred square miles of country, is ridiculous in the extreme; more especially when it is the rising generation who attend the schools, and who, by and by, would greatly feel the want of a

common language in their intercourse with the settlers.

"Another tendency of the missionary method of instruction so generally followed is, we think, of the worst description.

"Instead of preparing the native for the sphere of life by which alone he can hope to support himself and advance; instead of preparing him for future absorption into the mass of the settlers, there to take his stand, and in no wise, except by his colour, to be distinguished from them—what are the tendencies of the system of instruction followed? Sober and thinking men will be surprised to learn, that the whole of the efforts of the instructors seem systematically directed to the purpose of completely isolating the natives. Instead of first training them, and then teaching them to be dependent on their own exertions, the government seems to take upon itself to support them with food and clothing, to provide them with model farms to play with, to build barracks for their residence, and otherwise to treat them as if they fully intended them always to form a separate community. Such an absurdity is the worst possible thing that can happen to the natives themselves. Their isolation from the settlers, if unfortunately it should be carried out, can only end in their extinction. Let the government train and educate them if it pleases; but it ought never to be forgotten that their final end must be their extinction as a nation and their junction with the colonists. The settlers, as a body, have always shown the best of feelings towards them, and are ready to make any

sacrifices for their amelioration; but they naturally inquire why schools should be established to teach their black brethren, while their own children remain in ignorance; why the government money should be spent in training the natives in idleness, when labour is of the utmost value. They would be happy to employ them as mechanics and labourers, were they taught trades instead of psalm-singing. Natives who were acquainted with any of the useful arts would be sure of employment; and, were once a beginning made in that direction, their civilization would follow much faster than can ever possibly happen by the present method.

"These remarks apply principally to the generation now rising up, but advantage might easily be taken of the services of some of the young men of the present generation. The natives like confidence to be placed in them; and, whenever it is shown, there have been but few instances of their abusing it. We can see no objection whatever to employing them as constables, letter-carriers, messengers of government, or any situations which are somewhat in unison with their habits. In the few instances in which such has been tried, the success has been quite sufficient to warrant its continuance. These situations bring them into direct intercourse with the settlers, teach them the English language, and, by subjecting them to the control of the government, gradually wean them from the influence of their tribes and customs; and it gives the boys at the schools companions of their own race to whom they can look up.

"Every opportunity should be taken to keep the

boys and girls in training from the control and example of their wild countrymen. It is of no use whatever that instruction is afforded to them, while unrestrained liberty of mixing with the latter, by whom they are sure to be contaminated, is allowed. It would seem, by instruction being given them in their own language, that every facility should be given for this purpose. Instruction, however, in the English language would certainly have this advantage—that it would give the pupils a natural tendency to mix with the settlers; which tendency, as we have before mentioned, ought to be encouraged as much as possible.

"Their hunting grounds and haunts are gradually being encroached upon by the settlers. Subsistence is becoming day by day more difficult; and, unless some rational and consistent method of relieving them is quickly brought to bear, the government will be saddled with the whole support of the aboriginal population before it can retrace its steps, and get rid of the present absurd system."

APPENDIX.

No. I.

COMPARATIVE RETURN OF THE DISPOSAL OF THE CROWN LANDS OF SOUTH AUSTRALIA DURING THE YEARS 1844 AND 1845 *.

Date.	Quantity of Land Sold.	Average Price per Acre.	Mode of Sale.	Total Amount of Purchase Money.	
				Received in England.	Received in South Australia.
	Acres.	£ s. d.		£ s. d.	£ s. d.
1844	1,496½	2 6 4½	Auction	100 0 0	5,566 13 0
	1,931½	1 2 8½	Fixed price..		
1845	6,675	1 11 3½	Auction	21,100 0 0	52,902 8 0
	43,983	1 0 0$\frac{19}{100}$	Fixed price..		

Of the 21,100*l.* received in this country in 1845, 20,000*l.* was deposited in the Mining Association, who have since purchased with that sum 20,000 acres at Reedy Creek. Of the 49,658 acres of land sold during the year 1845, 5675 acres were sold by auction for 8884*l.* 8*s.* One special country lot, containing 35 acres, at 2*l.* per acre, and 43 country lots, containing 3226 acres, were sold, after exposure to but not by auction, at 1*l.* per acre. Two blocks, containing 20,000 acres each, were sold by private contract at 1*l.* per acre, and five lots, containing 713 acres, were sold under other regulations, in virtue of engagements entered into with the purchasers previous to the passing

* From the Seventh Report of the Emigration Commissioners.

of the Act 5 and 6 Victoria. In addition to the sum of 52,902*l.* 8*s.* received for land purchased in the colony, deposits amounting to 60*l.* 5*s.* were forfeited. Complete returns for the year 1846 have not yet been received; but it appears from despatches, that, exclusive of a special survey, presumed to be of 20,000 acres, at 1*l.* per acre, the sale of which was reported in June last, and the selection of another in virtue of the deposit of the Mining Company in England in 1845, already referred to, there have been sold at two auction sales in January and June, 3812 acres, realising 31,119*l.* 12*s.*, which sum does not include forfeited deposits for land to the amount of 1052*l.* 10*s.*

The principal subject connected with this colony, which was under consideration when we made our last Report, was the course to be taken in disposing of Crown lands known, or supposed, to contain valuable minerals. We mentioned that the Secretary of State, after referring to the various modes of proceeding which had been suggested, had authorised the Governor to establish, with the advice of the Executive Council, such rules as might appear best adapted to the circumstances of the colony, subject, however, to their being confirmed by Her Majesty's Government. The Lieutenant-Governor and his Council came to the conclusion that it would be preferable to adopt the methods recommended by our Board, of conveying the property in the mines to the same party who may acquire the property in the land, whether in fee simple, or for any less estate or interest, reserving to the Crown one general royalty for all mines alike, instead of a royalty varying in amount according to their productiveness and quality. The most important of the regulations are as follows:—

1. A royalty is named, to consist of one-fifteenth of the whole produce.

2. The general rule is to be sale by auction in fee-simple, with the reservation above stated, and such other reservations as may be necessary for the collection and recovery of the Crown dues.

3. Leases, however, may also be granted of lands, with mining rights, for periods not exceeding twenty-one years, in which leases the same royalties are to be reserved as upon lands

sold in fee-simple, but the price paid for the lease to be subject to competition at public auction.

4. No right of renewal or eventual purchase is to be secured to such leaseholders; but, on the other hand, the reversionary interest is not to be sold during their occupancy without their written consent.

5. A right is conferred of commuting, from time to time, for periods not exceeding twelve calendar months, the Queen's fifteenth in kind, for payments in money.

6. The proceeds of mines are to be applied in the same manner as those of land sales.

Some modification of the provision for granting leases for twenty-one years has been rendered necessary by the Land Sales Amendment Act, 9 and 10 Vict., c. 104, which only allows of leases for 14 years: but subject to this reduction in the duration of the leases the regulations have been approved by your Lordship.

The question how these minerals were to be dealt with was one of no ordinary importance, and not to be determined, as was remarked in one of the despatches upon the subject, by considerations of a temporary or partial nature. The copper ores of South Australia are already considered to be amongst the richest imported into this country. To effect no provision at the time when first such vast resources were opened, and whilst still they remained the property of the public, for making them contribute hereafter to the wants of the community, and for dispensing with more onerous modes of taxation, would have been inconsistent with universal usage where mines extensively exist, and might have exposed the Government to the charge of sacrificing the future interests and requirements of the colony to present convenience. The dues imposed are of moderate amount; they are of such a nature that they are small while the produce is small, and will gradually increase as the growth of prosperity in these pursuits may call for a larger revenue; while that their proportion to the whole produce is not excessive or burthensome is proved by the unquestionable fact of the very high prices which have been paid for all mineral lands since the royalty was declared. The reasons in favour

of this kind of reservation were set forth in our Report of the 14th of May, 1845, printed with our last Annual Report; some of the leading reasons in favour of making the reservation at all have been repeated in your Lordship's Despatches of the 30th and 31st of December last, in reply to objections made by some of the colonists, which Despatches we hope it may be deemed proper to print with the present Report.

The following is a comparative statement of the quantities and estimated value of ores exported from South Australia in the years 1844 and 1845:—

Year.	Ore Exported.	Quantity.				Estimated Value.		
		Tons.	Cwts.	Qrs.	lbs.	£	s.	d.
1844	Lead.....	203	0	0	0	2,427	0	0
1845	Ditto	175	19	0	9	1,839	8	0
1844	Copper	277	0	0	0	4,009	10	0
1845	Ditto	981	16	3	20	17,179	5	6

The 18th clause of the Land Sales Act permits the Governor, if he thinks it desirable for the promotion of enterprise, to dispose of tracts of 20,000 acres, at not less than the minimum price of 1*l.* per acre without competition. These are termed special surveys. The first two special surveys of mineral lands in this province were obtained in September and December, 1845, at the lowest upset price. In a despatch, dated the 16th of June last, the Lieutenant-Governor mentions that the purchasers of one-half of the first survey had in six months cleared the purchase price of the whole, and that their 5*l.* scrip was then selling in Adelaide for 40*l.* The mines included in the second special survey were also working steadily. The third and fourth special surveys were acquired last summer on the same conditions, as regards price, as the two first, but with the addition of the reservation of royalties. A fifth had been applied for, and intimations of an application for a sixth, besides reports of moneys being raised in Sydney for similar purposes, had been received by the Governor, when, with the

concurrence of the Executive Council, he thought proper to decline selling any more land in this manner, until he should receive instructions from England on the subject. For he found that, in point of fact, the land was worth greatly more than the minimum price; that yet he could possess no good means of determining what the price ought to be, otherwise than by the fair test of exposing it to sale in open market; and that if, on the other hand, he persevered in letting large tracts go for much less than their value in public estimation, he might be brought into most embarrassing positions, by having to decide between the conflicting wishes of different parties for the same land. We apprehend there can be little doubt that under such circumstances the only safe course for a Government is to adopt the method of sale by fair and open competition. This, we understand, is accordingly the course which, in conformity with the Lieutenant-Governor's opinion, your Lordship has authorised him to pursue. It is intended that no sales of mineral lands in large blocks, or by private contract, should take place, but that all should, once at least, be exposed to auction, and in sections of moderate extent.

Another important subject, to which attention has been lately drawn in reference to South Australia, is that of squatting. An act of the legislature for its regulation has recently arrived. The distinguishing feature of this measure is, that the country is to be divided into hundreds, and that every holder of purchased land within each hundred is to have a power of depasturing sheep and cattle over the waste lands of the hundred proportioned to the extent of his purchased land. For this purpose, the Commissioner of Crown Lands is to declare annually the quantity of stock which the whole waste within the hundred will carry, and then the quantity which each settler within the hundred is entitled to depasture, will be calculated in proportion to his holding of purchased land. If this plan had originated in England, our doubt would have been whether it would not have been attended with too many difficulties of a practical nature—such as that of the Commissioners of Crown Lands, in estimating the quantity of stock to be fed, and that of the settlers in preventing the mixture of

their flocks, or the spread of disease from one flock to another; but seeing that after being proposed in a more complicated form by Governor Grey, two years ago, it has now been embodied in an Act of the Governor and Legislative Council, we must take for granted that the means of carrying it into effect are sufficiently clear on the spot. Supposing this to be the case, the object for which the law provides appears to us well suited to such a colony as South Australia—we mean the object of giving those who purchase lands in fee-simple a corresponding facility in depasturing the adjacent lands at only a trifling assessment. There are some details which may possibly require reconsideration, in order to render the Act consistent with the Imperial Land Sales Amendment Act, 9 and 10 Vic., c. 104, which had not reached the colony when this measure passed. But to the principle of it, for the reasons above mentioned, we apprehend there can be no objection.

Before concluding the portion of our Report relating to South Australian lands, we may mention with satisfaction the adjustment of an outstanding account with the South Australian Company. The Company acted as the bankers in the colony of the late Board of Colonization Commissioners, and in that capacity received from time to time the proceeds of the lands sold under the Act of Parliament, 4 and 5 Will. IV. c. 95. At the time of the pecuniary difficulties of the colony a considerable sum from this source remained in their hands, but they retained it until a settlement should be effected of counterclaims which they produced against the Government. This settlement was amicably arranged in July last with the member of our Board who represents the late Colonization Commissioners, and it resulted in the Company's paying over to Mr. Barnard, to the account of the colony, a balance of 5570*l.*

The number of emigrants who received free passages from the United Kingdom for South Australia, during 1846, was 2044, of whom about 937 were selected and despatched by the Australian Mining Company, under general arrangements controlled by us, and 1107 selected and sent out by our Board. The two first of the vessels engaged by ourselves sailed early

in the year, but others were delayed until the Mining Company had despatched all the labourers they were entitled to nominate under their land order. We are happy to observe that the selections for the only Government ships of which accounts have as yet been received, were much approved of by the colonial authorities.

The numbers who have been despatched by public funds in Government ships since the commencement of the present year have been as follows:—

By the	"Theresa" . . .	237
	"La Belle Alliance"	290
	"Trafalgar" . .	279
	"British Sovereign"	210

The land revenue continues to be good, and every ship brings renewed accounts of the demand for labour, arising, no doubt, in great measure, from the general demand created by the working of the mines. Vessels, therefore, will continue to be sent by us at the rate of at least one in the month, and recently we have arranged for sending, for a while, as many as two per month. We have been fortunate enough as yet to procure the presence in them of a considerable proportion of stout and experienced miners, mixed with agricultural labourers; and our aim will be, without producing any oversupply of labour at any one particular moment, to render the accruing resources from land available, to prevent a stoppage of the active pursuits of the colony for want of hands.

No. II.

South Australia.

Statement of Land Sales from 1835 to 1845 inclusive.

Year.	Quantity of Land Sold.	Amount received.								
		In England.			In the Colony.			Total.		
	Acres.	£	s.	d.	£	s.	d.	£	s.	d.
1835	35,397	35,397	0	0	.....			35,397	0	0
1836	1,920	1,248	0	0	.....			1,248	0	0
1837	3,711	3,120	0	0	3,594	9	0	6,714	9	0
1838	48,040	37,960	0	0	10,080	0	0	48,040	0	0
1839	170,841	48,336	0	0	122,505	0	0	170,841	0	0
1840	15,565¾	7,040	0	0	8,525	15	0	15,565	15	0
1841	7,651½	320	0	0	7,331	2	0	7,651	2	0
1842	17,631½	80	0	0	17,001	10	0	17,081	10	0
1843	598	.....			613	13	9	613	13	9
1844	3,428	100	0	0*	5,566	13	0	5,666	13	0
1845	49,658	21,100	0	0*	52,902	8	0	74,002	8	0

No. III.

South Australia.—Regulations.

1. On all waste lands of the Crown hereafter to be alienated or conveyed, for any estate or interest, there will be reserved

* For these amounts certificates have been issued, entitling the holders to credit to a corresponding amount in any purchases of land they might effect in the colony.

Note.—The amount realised in England for 1846 was 700*l.* Complete returns have not yet been received of the lands sold and amount realised in the colony for that year; but it is stated in a return from the colony that the whole amount realised from sales of land, since the passing of the Land Sales' Act up to the 30th September last, was 129,666*l.* 6*s.* 8*d.*; from which it may be estimated that the sum realised in the first three quarters of 1846 was about 70,000*l.*

to her Majesty, her heirs and successors, one-fifteenth of all metals, and ores containing metals, lying upon, in, or under such lands, payable in kind, at the mouth of the pit, shaft, gallery, or quarry from which they may be raised. This, together with the following reserved rights, necessary for the collection of such royalty, will be inserted in the deeds of grant.

2. A right of free access to all mines, by duly appointed servants of the Crown.

3. A right to select, for free occupancy, a portion of land, not exceeding one quarter of an acre, near the mouth of every pit, shaft, gallery, or quarry from which metallic minerals may be drawn, for a residence or store, for such person or persons as may be appointed to receive the Queen's dish or dues, but for no other purpose, with privileges of access, of building thereon, and of removing buildings so erected.

4. The right of commuting, from time to time, for periods not exceeding twelve calendar months, the Queen's fifteenth in kind for payments in money.

5. The right of recovering such money payments by distress as in cases of rent, in the event of their remaining unpaid for a period of twenty-one days beyond the day on which they may be due under any contract or agreement in that respect duly made.

6. All questions regarding the commutation or composition of royalties, will be considered and determined by the Governor in Executive Council; and applications for that purpose must, therefore, be addressed to his Excellency the Governor in Executive Council, sealed and marked on the envelope—"Tender for Commutation on Royalties." Applications for renewal of contract must be delivered to the clerk of the council one full month before the expiration of the contracts, for the renewal of which such applications are made.

7. Lands will in general be sold as heretofore, but with the reservations already stated. When known or suspected to contain mineral ores, they will be proclaimed for as long a period before sale as the law will permit—generally about three months. If not known or suspected to contain minerals, the period of proclamation before sale will be about a month.

8. Lands already put up for sale and not sold, and now open to selection without competition, will be subject to the same royalties as other waste lands of the Crown.

9. Lands known to contain metals and metallic ores, may be obtained by lease, with the right of mining, for periods not exceeding twenty-one years, if so desired by capitalists. In such leases there will be reserved the same royalties as upon lands sold in fee-simple; but the price of the lease will be subject to competition at public auction.

10. On applications for leases of lands with mining rights being approved by the Governor in Council, the leases will be proclaimed for sale at auction in the same manner as lands intended for sale in fee-simple.

11. All leases so to be granted will contain clauses of forfeiture, and provisions for re-entry, for non-payment of royalties, or for under-letting, or assignment of the whole or any portion of the lands by the lessee without licence in that behalf first obtained from her Majesty, or the Governor in Council acting on that behalf for her Majesty: also, a proviso that it shall not be lawful for her Majesty, or any person acting on behalf of her Majesty, to sell the reversionary estate expectant upon the determination of the lease, without the consent in writing of the lessee or other party to whom the lease may then belong.

12. Subject to the charges mentioned in the Act of Parliament, 5th and 6th Victoria, c. 36, and to those of collection, the gross proceeds of the Queen's royalties on mines will be appropriated and applied to the like purposes as the proceeds of the sale of waste lands of the Crown under and by virtue of the provisions of that Act.

13. A fee of one pound sterling will be charged to meet the expense of preparing all deeds of grant and leases, whatever may be the amount of property conveyed. This fee will be paid at the registry office, but will be exclusive of the registration fee chargeable under the Ordinance 5th Victoria, No. 8.

No. IV.

SOUTH AUSTRALIA.

Downing Street, December 30, 1846.

SIR,—I have considered, with the attention due to the importance of the subject, and to the anxiety which it must excite in the colony of South Australia, your despatch, No. 16, of the 4th of March last, reporting the new regulations, which, with the advice of your Executive Council, you had issued for the purpose of reserving a royalty of one-fifteenth on all minerals raised upon lands sold after the date of those rules.

The question, I am fully aware, is one of no ordinary importance, and not to be determined by considerations of a temporary or a partial nature. The copper ores of South Australia are already considered to be amongst the richest imported into this country from any part of the globe, and traces are said to have been found in the province of some even of the more precious metals.

Under these circumstances, it is probable that the working of mines will withdraw a large number of hands from other occupations, and hence it is only just to those engaged in agriculture, to whom the high price of labour is already an inconvenience, that mining property should contribute somewhat in proportion to the amount of labour it absorbs, to the fund by which the expense of introducing immigrants of the labouring classes is provided for.

But assuming that mines are to be made to contribute to this fund, it seems to me that upon the whole the best and most convenient mode in which they can be made to do so, is by the reservation of a royalty, the proceeds of which are carried to the credit of the land fund, and applied to the same objects.

I am aware that this plan may be open to some objections, but to none which seem to me of equal weight with those which apply to any other method of deriving a revenue from mines which has hitherto been proposed.

One great security against inflicting any practical injury is to take care that the royalty is not fixed too high. But when

I perceive from some of the former reports, that in England, where mines of every descending degree of productiveness may be assumed to be sought after and worked, mining adventurers commonly afford to pay the owners more than one-fifteenth of the gross produce, I cannot but hope that such a proportion must be very moderate in an entirely fresh and rich field, such as is presented by South Australia.

Another great mitigation of any inconvenience from royalty would be to convert it, as soon as circumstances would admit, into a fixed pecuniary payment. In the absence of any other test by which to measure the future claims of the Crown, it was indispensable that they should be based on the gross produce of the mines; and, owing to the fluctuations in this kind of property, it would probably be equally inexpedient for both parties to enter into any commutations, except for short periods.

Much I must leave to your experience and observations on the spot; but I feel little doubt that, as soon as some estimate can be formed of the capabilities of different mines, you will find it advantageous, if the owners offer reasonable terms, to exchange the right to royalties for certain fixed payments in money, provided that the agreement be not made for any lengthened period.

It is objected to a royalty, that it will create a distinction between the owners of lands subject to it and the early settlers, who will hold their lands free from any such payment. This objection I shall have occasion to notice more fully in another despatch. I will merely observe here, that each class of purchasers knew beforehand the conditions to which their lands were to be subject, and that recent purchasers must be supposed to have offered no more for their land than they considered it worth, after all deductions to which it was liable.

The best proof that the new regulations are not practically felt as onerous, may be found in the results of the first public sale which took place after their promulgation. At that sale, I perceive, that whilst 1*l.* per acre had hitherto been the ordinary upset price of lands in the colony, some land was bid up to a price of 88*l.* per acre, and that the whole thirty sec-

tions comprised in the sale were sold at an average price of more than 10*l.* per acre.

I have now adverted to some of the principal grounds on which I am enabled to convey to you Her Majesty's confirmation of the new regulations adopted by yourself and the Council, and I trust that on consideration it may be felt in the colony that, by providing for a continued supply of labour, the measure is very important to the interests of all classes in the existing community, besides being better adapted than any other to provide, without fresh taxation, for any increased demands created by the future prosperity of South Australia.

In transmitting to you, however, this general approval of the regulations, I need scarcely observe that the provision for granting leases for twenty-one years will have required to be altered from the date when the Land Sales Amendment Act, 9 and 10 Vict., cap. 104, came into force in the colony. This Act only allows of leases for fourteen years; but as its operation would not commence until it was proclaimed by you, it will not interfere with the conditions of any leases which you may have previously granted.

I have, &c.,

Lieutenant-Governor Robe, &c. &c. (Signed) GREY.

No. V.

SOUTH AUSTRALIA.

Downing Street, December 31, 1846.

SIR,—Having, in a previous despatch, acquainted you with the grounds on which I have thought it my duty to advise Her Majesty to confirm the regulations adopted by yourself and the Executive Council for imposing a royalty on minerals raised in South Australia, I now proceed to notice the petition

framed by a public meeting, as communicated to me in your despatch, No. 37, of the 28th March, 1846, and to explain the grounds why I do not think that the arguments used at that meeting afford sufficient objection to the policy which you have deemed best for the public interests.

Much stress is laid on the circumstance that the early regulations stated that settlers were to receive grants of all above and below the surface; but all persons who settled under those regulations have, in point of fact, received grants of all above and beneath the surface; there is no question of applying any different rule to them. And, on the other hand, if it be meant to contend that the former regulations were to apply to all future times, and that a set of rules made by the executive authority of a former Board of Commissioners were to remain always unchangeable, I think it must be obvious that such a position cannot be maintained.

I see it remarked that a clause, declaratory of the power of the Crown to reserve minerals, had been inserted in a Bill brought before Parliament, but that it had not been sanctioned, and that Parliament had refused to authorise any reservation of minerals. There is some error in the impression which appears to prevail on this subject. No such clause was ever submitted to a vote in Parliament and rejected, as the argument assumes. A declaratory clause appeared in some of the Bills, and was omitted afterwards; but the fact is, that the law officers of the Crown had given their opinion that there was nothing to prevent her Majesty from making reservations of minerals, and the ground upon which the clause was omitted was, that it was unnecessary.

The proposed petition especially notices that the power to lease minerals has been taken for granted by the Colonial Government; but the Land Act, as you observe, gives you power to dispose of land either in fee-simple, or for any *less estate or interest*, provided the alienation be made by way of sale. I have not heard any good reason assigned why you should not, under that power, grant leases for terms of years, *if those leases be offered to public sale.* The recent Act will require that such leases should not be given for more than fourteen years.

It is complained that the Government will have it in its power to misappropriate a revenue drawn from royalties; this, however, would be an objection equally to every kind of revenue which falls to the disposal of the Executive Government. In point of fact, the new regulations declare that the proceeds of royalties are to be spent in precise conformity with what the contemplated petition recommends, viz., in the same manner as proceeds of land sales; and I quite concur in the propriety of that provision, and think that it must be deemed an essential part of the scheme.

The reservation of a royalty will, it is argued, create an unfair distinction between persons who acquire land under that condition, and persons who, having acquired it earlier, are subject to no reservation. If any distinction had been imposed on any lands *after* they were sold, it would doubtless be most unfair. But the objection, I think, overlooks the fact that, as the condition was distinctly announced beforehand, purchasers must be presumed in this, as in every other dealing, to have offered for their property only what they felt to be its value, after allowance is made for all limitations and deductions to which it is subject. That they have not deemed the deduction very serious, may be inferred from the prices paid at the first public sale after the reservation was announced; for at that sale, as I have already observed in another despatch, some of the lands were bid up to a price of 88*l.* per acre, and the average of the whole sales of the day was much above 10*l.* per acre.

The remaining argument which I perceive is, that the royalty may discourage enterprise, and interfere with the operations of industry; and, to a certain extent, I am well aware that every payment to the State is open to this objection; but yet, some such payment being indispensable, in order to provide for the maintenance of order and protection of property, the only practical question is, what tax is most fair and least burthensome to the community. This question, so far as it bears on the present impost, I have endeavoured to examine in my despatch of the 30th instant, and have explained the grounds on which I come to the conclusion that the reservation of a royalty is required for the public interests.

Here I close my remarks on the report you have forwarded of the public meeting respecting the new land regulations. Considering the number and respectability of several of the gentlemen who appear to have taken part at that meeting, I have been anxious to place you in possession of the reasons why I have not felt convinced by their arguments. And at any rate, I can assure you that, whatever may be the ultimate success of the measure, my approval of it has been dictated by no desire to accumulate a large revenue in the hands of Government, but by a sincere belief that this impost will prove beneficial to the owners of mines themselves, by contributing to that supply of labour which is essential to their success; fair to other classes of society, by tending to make up for the great diversion of labour to mining pursuits, and the consequent increase in wages; and, finally, if South Australia be made much more extensive and populous by its mines, a great boon to the enlarged community, by providing for its future wants without the need of resorting to more onerous modes of taxation.

I have, &c.,

Lieutenant-Governor Robe, &c. &c.

(Signed) GREY.

No. VI.

RETURN of EMIGRATION, by PUBLIC FUNDS, to SOUTH AUSTRALIA, in 1846 and commencement of 1847.

Name of Vessel.	Tonnage.	Date of Departure.	No. of Days on the Voyage.	Total Souls.	
SENT BY THE AUSTRALIAN MINING COMPANY, UNDER THE SUPERINTENDENCE OF THE COLONIAL LAND AND EMIGRATION COMMISSIONERS.					
		1846			
"Isabella Watson"	514	January 18	117	194	
"Britannia"	379	June 6	141	124	
"Hooghly"	466	July 3	144	217	
"Lady Bruce"	538	August 3	102	241	
"Abberton"	451	September 1	104	161*	
				937	937
SENT BY COLONIAL LAND AND EMIGRATION COMMISSIONERS.					
		1846			
"Phœbe" (1st voyage)	473	January 7	112	190	
"Canton"	506	April 26	97	255	
"David Malcolm"	495	October 13	103	196	
"Princess Royal"	462	November 14	.....	236	
"Phœbe" (2nd voyage)	473	December 22	.....	230	
				1107	1107
		1847			
"Theresa"	495	January 19	.....	237	2044
"La Belle Alliance"	676	March 8 and April 4	.....	290	
"Trafalgar"	635	March 18	.....	279	
"British Sovereign"	436	April 13	.....	210	
"Cressy"	634	†		1016	
"Aboukir"	663	†			
"Mariner"	600	†			
"Lady M'Naghten"	558	†			

* This includes 22 sent by a land purchaser.

† These vessels have been engaged to sail respectively, the beginning and end of May, and the beginning and end of June.

Comparative Return of the Nett Ordinary Revenue and Expenditure for the Years 1844 and 1845.

Revenue.	1844. £	s.	d.	1845. £	s.	d.	Expenditure.	1844. £	s.	d.	1845. £	s.	d.
Customs (including pilotage and tonnage dues)	20,124	17	0	25,590	16	7	Civil establishment	17,293	10	5	17,507	14	2
Postage	752	10	8	946	4	10	Contingent expenses	2,017	19	7	3,133	15	10
Fees of public offices	1,689	9	4	2,207	2	0	Judicial establishment	3,636	2	10	3,421	18	7
Fines levied in the court of justice	274	13	10	347	15	8	Contingent expenses	258	8	8	245	13	8
Licences	2,156	15	2	2,409	15	0	Ecclesiastical establishment	214	0	11	350	0	0
Auction duty	563	13	4	570	8	11							
Assessment on live stock	1,486	3	11	2,191	14	7							
Rents of Government property	189	8	0	704	17	11							
Permits	44	4	0	52	2	0							
Storage of gunpowder	24	6	11	65	10	5							
Total fixed Revenue	27,306	2	2	35,086	7	11	Total expense of civil establishment	23,420	2	5	24,659	2	3
Incidental	572	10	8	1,096	1	11	Contingent expenditure	6,033	8	3	7,440	1	2
Total Revenue	27,878	12	10	36,182	9	10	Total expenditure	29,453	10	8*	32,099	3	5
				27,878	12	10							
Increase on the year				8,303	17	0	Increase on the year				2,645	12	9

Note.—During the year 1845, Debentures to the amount of £14,751 12*s.* 6*d.* were liquidated from the Revenue account, by means of Loans from the Land Fund, which, not being "Ordinary Revenue or Expenditure," is not included above.

* There is a discrepancy of 2*s.* between this and the published return of last year, arising from an error in the summation of the latter.

Compiled from the records in the Colonial Secretary's Office.

Colonial Secretary's Office, 31st January, 1846.

A. M. MUNDY, *Colonial Secretary.*

No. VIII.

ABSTRACT OF THE RECEIPTS AND EXPENDITURE OF THE COLONIAL GOVERNMENT OF SOUTH AUSTRALIA FOR THE QUARTER ENDING MARCH 31, 1846.

RECEIPTS.

	£	s.	d.	£	s.	d.
CUSTOMS—						
Spirits imported	3,091	19	2			
Tobacco imported	1,455	8	7			
Wines imported	215	9	11			
Other goods imported	2,144	3	1			
Other Customs' receipts	178	2	3			
	7,085	3	0			
Deduct drawbacks and repayments	191	7	11			
				6,893	15	1
Postage				256	4	1
FEES FROM—						
Supreme Court	100	14	10			
Insolvent Court	52	4	8			
Registry Office	175	1	3			
Resident Magistrate's Court	42	0	0			
Police Magistrate's Court	22	12	0			
Registration of Dogs	2	9	0			
Sheriff	44	4	9			
Clerk to the Bench and Petty Sessions	109	0	6			
Slaughtering Cattle	91	7	6			
Certificates to Legal Practitioners	115	0	0			
" Medical "	1	1	0			
Colonial Secretary's Office	2	12	6			
Land Grant Office	32	9	0			
	790	17	0			
Fines levied in Police Court	36	19	6			
				827	16	0
Carried forward				7,977	15	2

	£	s.	d.
Brought forward . .	7,977	15	2
Auction Duty	74	7	6
LICENCES—			
Auctioneers' 50 0 0			
Publicans' General . . . 2,200 0 0			
" Wine and Beer . . . 96 0 0			
Storekeepers' 20 0 0			
	2,366	0	0
Assessments under Waste Land Act . . .	285	11	7
Licences under ditto (depasturing) . . .	0	5	3
Rent of Crown Property	186	2	9
Permits	14	3	0
Miscellaneous	54	8	6
Total receipts.	10,958	14	3

EXPENDITURE.

Governor and Judge	575	0	0
CIVIL ESTABLISHMENT—			
Establishment of his Excellency . . .	91	13	4
Councils of Government	68	15	0
Colonial Secretary's Department . . .	288	0	0
Colonial Treasurer's Department . . .	70	16	8
Auditor-General's Department	70	0	0
Customs Department	556	1	1
Survey and Land Department	551	18	11
Department of Public Works	159	12	8
Post Office Department	191	8	10
Colonial Store Department	75	0	0
Medical Department	182	19	3
Harbour Department	508	7	0
Police Department	1743	17	1
Inspector of Weights and Measures . . .	15	0	0
Aborigines' Department	321	0	5
Carried forward . .	4,899	10	3

	£	s.	d.
Brought forward	4,899	10	3
Commissioner of Public Lands	78	15	3
Port Lincoln	99	18	9
JUDICIAL—			
Supreme Court Office	138	0	0
Law Officers	117	10	0
Registrar-General's Department	162	10	0
Sheriff's Office	87	10	0
Resident Magistrate's Court	155	10	0
Coroner	37	10	0
Clerk to the Bench of Magistrates	30	0	0
Gaol Establishment	205	15	11
Colonial Chaplain	87	10	0
Printing	149	13	9
Stationery	7	10	0
Keeper of Public Offices	25	0	0
Labourer at Government Farm	13	0	0
Ditto Government Domain	13	0	0
Rent of House in Currie Street	37	10	0
Rent of Court and Law Offices	50	0	0
Keeper of Law Offices	20	0	0
Fuel for Public Offices	3	7	3
Inspector of Slaughter Houses	25	0	0
Public Repairs and Improvements	1,756	6	10
Miscellaneous Unforeseen Expenses	757	9	9
	9,527	17	9

	£	s.	d.			
Salary to Emigration Agent, and expenses of widows, orphans, deserted women and children	164	17	4			
Debentures for Outstanding Claims	2,088	16	0			
Interest on ditto	48	15	4			
Carried forward	2,302	8	8	9,527	17	9

				£	s.	d.
Brought forward . .	2,302	8	8	9,527	17	9
Repayment to Land Fund on account of sums borrowed for payment of Debentures . . .	1,000	0	0			
				3,302	8	8
Total Expenditure				12,830	6	5

NOTE.—The publication of this Abstract has been deferred until the completion of the Customs accounts for the quarter, from which account the detail of Receipts above shown, under the head of "Customs," has been obtained.

W. H. MATURIN, *Auditor-General.*

Audit Office, Adelaide,
May 27, 1846.

No. IX.

Comparative Return of Exports, the produce of South Australia, for the Years 1844 and 1845.

	1844.			1845.		
	Quantity.	Value.		Quantity.	Value.	
		£	s. d.		£	s. d.
Alkali	....	....		5 cwt.	1	0 0
Animals, living—Cattle	20	100	0 0	30	120	0 0
,, ,, Horses	....	....		1	20	0 0
,, ,, Sheep	25	12	10 0	1,150	595	0 0
Bacon and Hams	62 cwt.	166	4 0	144 cwt. 2 qr. 4 lbs.	367	13 0
Barilla	5 tons	20	0 0	....	....	
Bark	856 tons	3,310	0 0	239 tons 14 cwt.	883	0 0
Beer	....	....		27 gallons	4	10 0
Bread and Biscuit	16 cwt.	10	0 0	37 t. 19 c. 1 qr. 4 lbs.	636	0 0
Beef and Pork	2 cwt.	2	18 0	11 barrels	31	0 0
Butter	410 cwt.	1,137	2 8	390 cwt. 2 qrs. 3 lbs.	1,615	13 0
Cheese	74 cwt.	268	5 6	10 t. 2 c. 1 qr. 4 lbs.	537	6 0
Corn—Barley	65¼ qrs.	83	3 0	151¼ qrs.	168	0 0
,, Bran	348 qrs.	116	3 6	724⅜ ,,	281	10 0
,, Malt	....	....		17¼ ,,	31	0 0
,, Oats	30 qrs.	48	0 0	192½ ,,	197	0 0
,, Wheat	11,294½ qrs.	12,014	16 6	11,271½ ,,	13,626	7 6
,, ,, Flour	16,978 cwt.	8,014	9 0	969 t. 12 cwt. 3 qrs.	11,270	10 0
Eggs	....	9	2 6	50 dozen	1	10 0
Fish	....	....		....	1	0 0
Galls	53 cwt.	67	6 0	....	....	
Gum	2,362 cwt.	2,500	15 0	335 tons 2 cwt.	7,119	0 0
Guano	....	....		2 cwt.	0	10 0
Hay	25 tons	74	0 0	6 tons 12 cwt.	30	0 0
Horns, Hoofs, and Bones	....	18	2 0	....	7	0 0
Jam	....	....		....	3	0 0
Lard	2 cwt.	5	5 0	18 cwt. 1 qr. 12 lbs.	58	0 0
Leather	35 cwt.	264	0 0	....	....	
Machinery	....	63	10 0	....	101	0 0
Oil—Black	127⅛ tuns	3,375	10 0	70 tuns	1,390	0 0
,, Sperm	4 tuns	215	10 3	....	....	
Ore—Copper	277 tons	4,009	10 0	981 tons 17 cwt.	17,179	5 6
,, Lead	203 tons	2,427	0 0	175 tons 19 cwt.	1,839	8 0
Onions	....	....		74 bushels	17	6 0
Potatoes	....	....		3 tons	15	0 0
Plants and Seeds	....	2	0 0	....	29	0 0
Salt	130 tons	380	0 0	159 tons	549	10 0
Skins and Hides	....	161	3 0	....	31	0 0
Soap	....	....		1 cwt.	1	5 0
Specimens of Natural History	....	21	0 0	....	89	0 0
Stone and Slate	....	....		....	104	0 0
Timber	....	29	18 0	....	....	
Tongues	....	....		....	2	0 0
Vegetables	....	40	0 0	....	....	
Wine	2 gallons	1	4 0	26 gallons	17	0 0
Wood	....	....		....	35	0 0
Wheels	....	....		....	15	0 0
Wool	819,897 lbs.	42,769	15 9	1,331,788 lbs.	72,235	12 0
Whalebone	1,213 cwt.	590	10 0	32 cwt. 1 qr. 19 lbs.	544	10 0
Totals		82,268	13 8		131,800	6 0

Compiled from records in the Colonial Secretary's Office.

A. M. MUNDY, *Colonial Secretary.*

Colonial Secretary's Office, 31st January, 1846.

No. X.

COMPARATIVE RETURN OF THE QUANTITY OF LAND UNDER CULTIVATION IN THE YEARS 1844 AND 1845.

Crops.	Acres under Cultivation.	
	1844.	1845.
Wheat	18,980	18,838
Barley	4,264¼	4,342½
Oats	1,045	1,485¾
Maize	241½	86¼
Potatoes	397¼	459
Garden	761	631
SELF-SOWN.		
Wheat	888½	249
Barley	170	56
Oats	160	71
Totals	26,907½	26,218½
No. of Proprietors	1,357	1,269

NOTE.—The apparent deficiency in the quantity of land, returned as self-sown in 1845, may be accounted for by the fact of the Returns for that year not having been collected till the commencement of the harvest season, at which time many of the self-sown crops may have been already cut for hay.

Compiled from records in the Colonial Secretary's Office.

A. M. MUNDAY, *Colonial Secretary.*

Colonial Secretary's Office,
31st January, 1846.

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